Agriculture, Department
Bombay Presy.
Report
1883-84 to 1892-93

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BOMBAY BRANCH
OF THE
ROYAL ASIATIC SOCIETY.
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Agriculture Dept. B'bay Prov.

Reports 1883-84 to 1892-93

# ANNUAL REPORT

OF THE

# DIRECTOR OF AGRICULTURE,

# BOMBAY PRESIDENCY,

FOR THE YEAR 1883-84.

Bombay
PRINTED AT THE GOVERNMENT CENTRAL PRESS.
1884.

BOMBAY BRANCH
OF THE
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CLASS

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# OF AGRICULTURE,

## BAY PRESIDENCY,

FOR THE YEAR 1883-84.

Bombay:

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No. 1012 OF 1884.

From

E. C. OZANNE, Esq.,

Director of Agriculture,

Bombay;

To

J. MONTEATH, Esq.,

Acting Secretary to Government,

Revenue Department.

*Bombay, Secretariat, 16th October* 1884.

SIR,

I have the honor to submit this the first Annual Report of the Agricultural Department of the Bombay Presidency.

The suggestion that an Agricultural Department should be created under each local Government emanated from the Famine Commission.

In October 1881 the Bombay Government proposed to the Secretary of State to appoint me Director for the Presidency. I had joined the Royal Agricultural College, Cirencester, in the previous May. The Secretary of State supported the recommendation and allowed me to remain in England till the middle of 1883 to complete the Cirencester course. My furlough expired on 9th September 1882. I returned to duty in India on the 9th July 1883 after having obtained the diplomas of the Royal Agricultural College and of the Royal Agricultural Society of England.

2. The scope of my duties is defined in Government Resolution No. 5542 of the 26th July 1883 and in the office note appended to Government Resolution No. 4576 of 16th June 1883.

I may here set forth one or two extracts:—

> "The office of Director of Agriculture is one of observation and of experiment. Everything bearing on agricultural prosperity and decadence is within his province and subject-matter for his suggestions."

> "Mr. Ozanne should be considered under the immediate orders of the Revenue Department. The personnel of the Department will be created by degrees as its operations expand and as the Director is able to take up the various sections of his business. His Excellency in Council intends, however, that the Agricultural Department should be constituted generally in the form suggested by the Famine Commission's Report, Part I., pages 40-41."

3. The following specific duties which have been laid upon the Director may be enumerated:—

(1). The compilation and maintenance of an analytical study of each district with a view to ascertain its need for protection against famine.

(2). The preparation of agricultural statistics.

(3). The maintenance of the statistical record which is placed before the authority entrusted with the revision of rates of assessment.

(4). The subjecting of the reported results of crop experiments to careful analysis and criticism and the conduct of personal test experiments as far as possible.

(5). The supervision of the experimental farms and the direction of all technical operations thereon.

4. From the date of my arrival till the middle of October I was almost exclusively engaged as Secretary to the Committee for preparing a Draft Famine Code.

In October I went to Madras to see the Saidapet Farm and College. In November I visited the Ahmednagar Agricultural Show and the Nadiád School

Farm in Kaira. In December I proceeded to Calcutta to a Statistical Conference. On my way back I paid a visit to the Cawnpur Experimental Farm. In January I went to Dhárwár with the Survey and Settlement Commissioner to organize a special establishment of Revenue Inspectors—a subject which I shall refer to again. In February I was present at the Máheji Exhibition in Khándesh and after that I visited the Government Experimental Farm at Bhadgaon in the same district. In February and March I made a tour through the wheat districts of Ahmednagar paying at the end of March a second visit to Bhadgaon. I was then obliged to go to Poona to open a silo. In April I camped at Igatpuri in order to study survey classing and the ráb question. Thence I paid a third visit to Bhadgaon. I returned to Poona late in May. Early in June I was again compelled to go to Dhárwár to set the newly sanctioned Revenue Inspectors to work. I have been obliged since that time to remain at head-quarters.

5. An establishment of one clerk (Rs. 20) and three peons was sanctioned to assist me in my duties as Secretary to the Famine Code Committee. This establishment was subsequently made permanent. In November an additional clerk on Rs. 50 was granted, and in July 1884 a Kánarese clerk on Rs. 15. In October 1884 the Gazetteer Establishment consisting of 7 clerks with pay aggregating Rs. 585 per mensem was transferred to me as Director of Agriculture on the completion of the Gazetteer work under Mr. James M. Campbell. Mr. Campbell's Assistant Ráo Bahádur Bhimbhái Kirpárám was at the same time appointed my Personal Assistant with the rank of Deputy Collector, 5th grade (Rs. 400). I have now an efficient head-quarter office under my Personal Assistant in Bombay, and a small establishment which accompanies me on my tours. The head-quarter office is at present located in the Secretariat, but it is intended as soon as convenient to bring it permanently to Poona.

6. The divisions, prescribed by Government Resolution No. 4333 of 29th May 1884, for reports of Agricultural Departments will now be taken in order. Some heads will only be enumerated because not yet entrusted to me. Others can be but partially reported on.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

Government Resolution No. 6511 of 1st September 1883, Revenue Department.

7. In consequence of proposals made by the Government of India on the subject of the better organization of the staff required for the supervision of village records, a Committee consisting of the Commissioner, C. D., the Survey and Settlement Commissioner and the Director of Agriculture was appointed to elaborate the scheme set forth by Government, the main outlines of which were :—

(1) that the supervising agency should be reformed and remodelled by the substitution of a better educated, better paid and more numerous class of men for the present Bhág Kárkúns, *i.e.* those members of the Mámlátdár's staff yearly nominated to supervise the work of the village accountants and to do the miscellaneous work (revenue and other) which cannot be done at the Mámlatdár's head-quarters;

(2) that this new Agency should form at the same time the statistical establishment of the Director of Agriculture, and a part of the regular staff of the Mámlatdár, though exclusively employed on its special duties.

The outcome of this Committee's deliberations was the introduction into the Dhárwár District as a tentative measure of a staff which will be described in detail.

The Dhárwár district was chosen because the revision survey has been fully introduced there. The new staff is not only an agency for supervising the work of the village accountants, but it is intended to succeed the Survey Department. In Dhárwár, therefore, the valuable survey records have been handed over to the custody of the Agricultural Department. All survey work which will arise, all alterations in the boundaries of survey numbers whether due to partition by decree of the Civil Court or to land taken up for public purposes, or to alluvion or to other causes, will be carried out by the new staff together with the necessary corrections of the survey records. An exception has been made regarding the heavy work caused by the new railways which pass through the Dhárwár district and a special establishment of surveyors sanctioned

under the Superintendent of Surveys in the Southern Marátha Country. This officer has also undertaken to clear off arrears of work which existed at the time of the introduction of the new staff.

The sanctioned staff consists of a District Inspector with an assistant and with an office composed of 2 record-keepers and a clerk under the immediate control of the Director of Agriculture and of 39 Circle Inspectors at the rate of 2, 3 or 4 to each táluka of the district. These Inspectors are not members of the Agricultural Department but part and parcel of the regular revenue staff of the district and under the orders of the Mámlatdár. Their duties are formulated, however, by the Director in consultation with the Collector. They are also appointed by the Director subject to the approval of the Collector. That officer, however, has no power to employ them on any but their prescribed work, whereas the Director is permitted to correspond direct with them in order to obtain any information which he may require officially.

Looking to the importance of the prompt performance of miscellaneous survey work, a large proportion of the Circle Inspectors has been drawn from trained survey subordinates; the remainder have been principally chosen from the district revenue staff.

For the same reason the post of District Inspector is filled by the late Huzúr Surveyor. His Record Kárkúns were trained in the Survey Department.

The Assistant District Inspector is a passed agricultural student of the College of Science, who has had four years' experience as Agricultural Instructor in a High School.

The Circle Inspectors have nothing to do with revenue fiscal matters, nor with the heavy miscellaneous work which formerly devolved on the Bhág Kárkúns. One Bhág Kárkún in each táluka has been reduced, but the remainder will be required to do all the duties which were deputed to them formerly, save and except the special ones now entrusted to the Circle Inspectors. The Circle Inspectors are supervised by the Mámlatdár and Assistant Collectors and in addition by the district staff of the Director of Agriculture, though their supervision is limited to advice, aid, and inspection.

The Director is not permitted on his own authority to make any change in the forms or rules relating to agricultural statistics and village records, but is at liberty to make suggestions for their improvement in consultation with the higher revenue officers.

The total estimated cost of this additional establishment when introduced throughout the Presidency will not be less than 2½ lákhs per annum. This includes no provision for Circle Inspectors in Gujarát where the Talátis as village accountants are superior to the hereditary Kulkarnis and Shánbhogs of the other divisions. But this expenditure will provide an establishment to succeed the Survey Department and to keep up the survey record, which will be the invaluable legacy of that Department.

8. On the subject of the organization and maintenance of village records, other important work has been undertaken. The forms in which agricultural statistics are to be kept have been recast with the view of ensuring greater accuracy. A committee of the Divisional Commissioners and the Survey Commissioner subsequently assisted by a sub-committee of experts has thoroughly remodelled Huzúr Form No. 17 H. and prepared a complete list of the crops grown in the Presidency and a set of formulæ for ascertaining according to its estimated quality in annas the approximate yield in pounds per acre of each crop enumerated in that list. These formulæ are still in the press.

9. Later on the recommedations of the Statistical Conference held in Calcutta in December last, of which I was a member, have been considered by committees in Poona during the past rains. The results will be generally speaking the transfer of purely agricultural statistics to the Agricultural Department and the separation of fiscal from agricultural statistics, an improvement in the village forms, and it is hoped means for collecting and tabulating more correct and useful returns of produce.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

10. I have decided to commence with the Dhárwár district, because the new staff referred to above has been introduced into that district. I shall have to make a tour this year to test the work done by the Circle Inspectors and the opportunity will be utilized to amend the outlines of the scheme for district analyses already drawn up. This sketch is given in Appendix A of this report. I propose to supplement the information now contained in the Gazetteer Statistical Accounts by details which could not find place in the Gazetteer. It is hoped that each analysis will form a useful Agricultural District History and Manual and a suitable introduction to the information which will be collected by the Agricultural Department. The sketch given in the Appendix has been drawn up by Mr. James Campbell.

I shall include in the sketch under the head Model and Experimental Farms a notice of the numerous experiments that have been made from time to time in the introduction of new staples, new manufactures, new implements, and the like, so that the experience dearly bought in the past may be rendered available as a guide for the future.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

11. Not taken up.

## IV.—MEASURES OF PROTECTION, INCLUDING—

*(1). Fodder Reserves and Arboriculture, (2). Extension of Communications, (3). Irrigation.*

12. On this head I have little to say. I would only refer to *bábul* (Acacia arabica) plantations. A hope has been raised by enquiries made all over India that a profitable export of *bábul* pods for tanning purposes may arise. As a test of the probability of profitable export a quantity of pod shells has been sent to England. I have put myself into communication also with Messrs. Fischer & Co. who, at the request of the Trades Association in Berlin, are making enquiries. Sample bags were sent to Messrs. Fischer & Co. A reply has come that all the tanners and dyers interested in the subject show reluctance to make any offer till they know the exact price at which the article can be supplied and till they have satisfied themselves whether the importation can be made to pay. Whether the export will arise or not, the importance of encouraging the extension of *bábul* to provide fuel and fodder reserves, especially in the treeless Deccan, cannot be denied and has been fully recognized by Government (Government Besolution No. 6282 of 5th August 1884). "The cultivation of *bábul* should be encouraged as largely as possible, and the district officers should use every endeavour to induce holders of land and other persons to undertake to form *bábul* plantations on lands suitable for the purpose near their villages. Government will be prepared to grant any reasonable concessions which may be considered necessary in dealing with applications for land." Much now therefore depends on the exertions of district officers. Their hands have been strengthened by the declared desire of Government. The progress made will be reported by me. Any reader who may desire to have the full results of the enquiries made in this Presidency may find them in the accompaniments of the Government Resolution above quoted, or in the issue of the *Indian Agriculturist* of the 13th September 1884.

13. The subject of arboriculture is dealt with in the Forest Reports, and as regards road-side tree plantation in the Administration Reports. There is one point, however, where the interests of agriculture appear to conflict with those of the aims of the Forest Department and which therefore requires special attention by the Agricultural Department. I refer to the *ráb* question. Some Forest Officers on the one hand contend that the use of brushwood for *ráb* is unnecessary and that as the people have no "right" to denude the hills by lopping the trees and bushes, "the permissive privilege" should be denied them. On the other hand the Revenue Officers assert that *ráb* of brushwood is absolutely necessary in certain districts to produce good rice and other (*nágli* and *vari*) crops. The Commissioner, C. D., as far back as 1880, while admitting that it is in the very highest degree necessary to curtail, as far as practicable, the system of destruc-

tion of trees and underwood for *ráb*, pointed out that change in the system must not be too suddenly enforced against the cultivators. He suggested that suitable areas should be selected in each village, planted and looked after by the Forest Department and worked for *ráb* under the supervision of that Department. This suggestion was fully approved by Government, and ordered to be carried out. How far it has been carried out I have not had an opportunity of ascertaining. At the same time careful experiments were directed to ascertain whether the assertions of the Forest Conservator, N. C., that the use of brushwood for *ráb* can be avoided by the use of grass alone, grass and cow-dung, and grass, cow-dung and fallen leaves, are well founded or not. These experiments have been conducted for three years, but owing to misunderstanding of the details of *ráb* and its objects they have proved nothing. I have made a beginning in the study of the subject. My letter No. 501 of 9th June was printed on 30th August 1884 in the *Indian Agriculturist*. The chief point ascertained so far is that the manurial value of *ráb* is one of its least important properties, and very far from being the chief one as is evidently the opinion of the Forest Conservator, N. C.

41. Mr. W. F. Sinclair, Bom. C. S., has prepared a very careful pamphlet entitled "Notes on Arboriculture in the Bombay Presidency." The copyright was offered to Government and the offer was accepted. The pamphlet has been extensively distributed. It is intended as a manual for District Officers, Engineers, and members of Municipal and Local Fund Committees to assist them in the plantation of roads, camping grounds, tanks, canals, and the like.

## V.—AGRICULTURAL EXPERIMENTS, INCLUDING FARMS.

15. I propose under this head to give the principal results of the Experimental Farms of the Presidency and to notice the manner in which it is intended to deal with the general subject of agricultural experiment and then to refer to special experiments which have been carried out during the year under report.

### A.—Experimental Farms.

16. There are two such, *viz.* (1) at Hyderabad (Sind) and (2) at Bhadgaon in Khándesh.

Under new arrangements the reports of these Farms are confined to an annual report, giving the history of operations for a whole year, to be submitted on the 5th June, and a supplementary progress report due on the 1st January.

The annual reports are printed and published as soon as possible, and circulated to all Agricultural Departments and Societies and to certain public bodies. All departmental and controversial matters are excluded. The reports are purely narrations of the facts of the year.

17. As regards the authority with which the Director of Agriculture is invested it has been ruled that "the Superintendent shall continue to be subordinate to the Collector and responsible to him for the proper performance of his duties, while the Director will give the instructions which from his special knowledge he is able to give regarding the experiments to be made and the methods to be adopted. The Superintendent and other officials of the Farm will be expected to carry out the instructions of the Director in regard to all the purposes of the Farm. It is always the desire of His Excellency the Governor in Council that the authority of the Collector over all departments within his district should be maintained, but the technical operations for the conduct of which a special officer is selected and which form his exclusive field of duty, must unquestionably be under the control of that officer."—(Government Resolution No. 6957, dated 30th August 1884).

18. A scheme for the reorganization of the Bhadgaon Farm proposed by me has received sanction.—(Government Resolution No. 6957, dated 30th August 1884). Its main features are:—

(1). That the large area of the Farm must be maintained. About 700 acres under permanent pasture are required to feed the herd of Maisur cattle; 350 acres more will be available to produce selected cotton seed of approved varieties for distribution in the district. In fixing the rotations for cotton this area will be used to improve local indigenous products as wheat, til (Sesamum indicum) &c., by careful cultivation and selection of seed. The remaining 100 acres

will be devoted to experiment. This area will not be constant. The principle is to be maintained that the area utilized for experiment should be the smallest consistent with the object in view—that of obtaining trustworthy results.

(2). That inasmuch as there is already a considerable herd of Maisur cattle on the Farm, further experiments with crossing should be abandoned. The Maisur breed has been proved very suitable for plough work and the Superintendent is to weed out by degrees animals of other breeds, and by systematically importing good bulls to endeavour to keep the Maisur herd pure and unmixed. After the wants of the Farm have been met, there will be yearly an increasing number of good Maisuris for sale in the neighbourhood.

The Aden herd on the Farm will however be kept till it can be removed to Poona where the milk will be saleable.

(3). That the Superintendent of the Farm should be allowed to travel throughout the Khándesh and adjoining districts with the object of studying native systems of agriculture and of ascertaining to what special points the experiments and operations on the Farm should be directed. This decision has necessitated the appointment of an Assistant Superintendent. Additional clerical assistance has also been asked for. The effect will be to free the Superintendent from office work and to enable him to extend the influence of his knowledge and work beyond its present circumscribed limits.

The obligation to make the Farm financially successful has been removed as regards the experimental area and has been made subordinate to the principal aims of the non-experimental portion.

These principles it is hoped to apply as far as they are suitable to the Sind Farm.

19. I have prepared forms of accounts and registers for the proper record of the operations and results of the Farms which have been accepted. The Calcutta Conference considered it desirable that uniformity in Farm returns and accounts should be introduced as far as possible. The first step is taken. The accounts and returns are now uniform for this Presidency.

20. I give in Appendix B. some general directions as regards the conduct of experiments on the Farms which have been issued.

B.—Sketch of operations on the Farms during the year.

21. As regards the working of the farms during the past year little need be said. I have separately reviewed the Farm reports. At Bhadgaon the work was far from satisfactory. Experiment was almost totally neglected. The financial results were decidedly bad. The permanent incumbent, Mr. Stormont, was absent on leave and to that fact added to untimely and excessive rainfall the results were chiefly due. The details are given in the report which has been circulated.

The season was abnormal. The rainfall exceeded by 11 inches the largest previous recorded fall on the Farm. Its distribution was unfavourable. Nearly 10 inches fell in the latter part of August and the rain continued almost without cessation through September and October. The late rains delayed rabi sowings, but were otherwise very favourable. As cotton is the principal product of the Farm and as it suffered most from the heavy October rain, the loss was heavy. Jowári yielded well in land which was carefully weeded. Bájri was almost a complete failure. The rabi crops were better, but prices were so low that the profit was small.

The yield of cotton was 4,596 lbs. clean cotton in 189 acres against 10,982 lbs. in 207 acres of the previous year and 15,916 lbs. in 152 acres in 1818.

22. Mr. Stormont has described the position of the saw-gin in Khándesh and its probable future. It must stand or fall with the extension or decrease of exotic cotton.

Sugar-cane suffered by the ravages of jackals. The experimental cultivation of amber cane has not made any advance.

Cheese-making appeared at one time to have made progress, and it was thought by me sufficiently advanced to be introduced in Poona, but it was found that the cheese would not keep. Mr. Stormont has during his furlough collected information on the subject and will give it a further trial.

The live-stock except sheep were healthy, and it may be noticed with some satisfaction that the periodical sales of cows in calf have gone some way to improve the cattle of the neighbourhood. The Aden herd has been healthy and prolific, but the cows have not shown the extraordinary milk-yielding qualities with which they are usually credited.

23. *Sheep.*—Half the entire flock has been lost. This is chiefly due to mortality among the Sind dumbás. All the rams and pure-bred lambs have died and only 9 out of 49 ewes are left. But the crosses which have been secured between this breed and the indigenous breed are very fine and healthy. They are large sheep with heavy fleeces of fine wool and will now form the foundation of a new flock. During his absence Mr. Stormont studied M. Pasteur's theory of inoculation as a preventive of anthrax. He has operated on 66 animals (cattle, buffaloes and sheep). It remains to be seen how far protection has been secured. Mr. Stormont has brought out a new plough constructed at Ipswich under his supervision.

24. *Hyderabad Farm.*—The total area of the Farm is nearly 87 acres, of which 10 are or will be occupied by roads, buildings and water-courses. Of this area 51½ acres have been brought under cultivation against 35 acres last year. When the land was taken up for the Farm it was nearly all under jungle, overrun with "dub" grass and so uneven, that portions were unirrigable till they were levelled.

Rabi crops have been secured for the first time this year. These comprise wheat, barley, potatoes, mangolds and carrots.

25. During the inundation season the land is irrigated from a water-channel fed from a canal. In high floods irrigation is possible by gravitation, but the permanent arrangement for irrigation is by steam-power. As long as water remains in the channel it is raised by two 8″ centrifugal pumps driven by an 8 H.-P. portable engine. This source of supply cannot in the most favourable seasons be counted on for more than 3 months. At other times the supply of water is drawn from the Indus by a 6 H.-P. engine working a 5″ centrifugal pump. It is carried 1½ miles by a brick and concrete channel on a raised earthen embankment which was completed in January 1883.

26. As to buildings, the following are completed :—

1. Bullock shed for 6 pairs.
2. Line of rooms for the Farm workmen.
3. Store and granary.
4. Quarters for the Assistant Agricultural Teacher and for the pupils of the Agricultural Class.

An engine shed with a smith and carpenter's workshop, quarters for the clerk and a bungalow for the Superintendent are in course of erection.

The Farm has now been 3 years on the new site.

27. The Chemical Analyser has carried out analyses of the soil of several of the fields, which show that the land was mostly of low fertility when first taken up.

28. The Superintendent of the Farm has charge also of an economic garden supported from Local Funds. The pay of the establishment—of a Mukádam (Rs. 16) and two clerks on Rs. 35 and 30—is equally divided between the Farm and garden. One of the clerks has only lately been added.

29. The seasons of 1882-83 and 1883-84 present a remarkable contrast. In the former year high floods and heavy rainfall in the cultivating season were followed by a rainless September when great exertions only saved the crops. In the latter an unusually low inundation and scant rainfall taxed the powers of the Superintendent.

The water-course has been completed.

30. Mr. Strachan continued the experiments with selected seed for bájri, described in the Administration Report for 1882-83, page 190. But the results are quite contradictory owing, probably, to theft of some of the produce. A large number of varieties of jowári were tested and some approved sorts kept for future sowing. Jowári yielded fairly as a hot weather crop grown for fodder. Experiments were made on varieties of tobacco. Shiráz was compared with Sindhi. The yields were nearly equal. Of several varieties a new introduction, Mycrophyla, gave the heaviest crop, but its quality was so poor that it is not likely to pay. A small experiment was made to test the comparative value of goat-dung and poudrette on tobacco. The result showed no superiority of one manure over the other, but this is so far satisfactory in that the local tobacco growers do not believe in any manure but goat and sheep dung for tobacco. Poudrette has given as good a yield. Last year it gave a higher outturn. Tobacco is little cultivated in the neighbourhood, and Mr. Strachan will do good service if he can prove it to be a profitable crop and induce its cultivation. On the Farm Nánkin, Sindhi and Dhárwár-American cottons were tried. The success with Nánkin is encouraging. Mr. Strachan does not believe in hybridization and asserts that seeds from pods producing dark coloured lint will yield a lint of the same colour. If this fact is verified, one of the chief difficulties with Nánkin cotton will be removed. In his endeavours to improve the indigenous variety some success has been attained. The Sindhi cotton was priced Rs. 2 per maund above the usual figure for indigenous cotton. This endeavour to improve the variety of the country is important. No doubt exotic cotton of the Dhárwár-American variety is superior, but it is not so suited to the climate. I am fully convinced that it is as important to seek to improve the cottons which grow well as to introduce new varieties. A calculation is given to show that even taking into account the higher value of the exotic cotton, the net profit per acre is less than that secured from the inferior varieties.

Mr. Strachan pickled wheat to prevent rust. He did not succeed. Pickling prevents smut, not rust. Barley was found to yield well though it suffered from rust as did wheat. Potatoes, mangolds and carrots were grown. Mangolds were very successful. Two varieties gave 12 tons of roots per acre, but the plots were too small to base any decided opinion on as to future prospects, and no intimation is given as to how the produce was valued.

*Ploughs of the Strachan-Bayliss make.*—The demand is greater than the supply. The price has been raised from Rs. 7 to Rs. 7½. Following the example of the Farm 4 engines have been erected by private cultivators and are at work on the Fuleli Canal. It is reported that those who have tried steam for irrigational purposes are satisfied that it pays them better than bullock-power.

The Agricultural Vernacular Class has kept up its number, and has proved itself to be a thoroughly practical institution and will ere long, the Collector is confident, be productive of much good to the country. Of 12 boys who went up for the final examination 9 were successful. The High School English Class is reported to be a failure, and the Collector is in correspondence with the Educational authorities as to the advisability of closing it.

The financial result of the Farm shows a deficit of only Rs. 783. This is exclusive of the pay of the Superintendent and the clerical establishment. I regret that some important items have either been neglected or incorrectly entered. But the result is satisfactory, especially when it is borne in mind that heavy expenditure is still incurred in bringing the land under cultivation.

An experiment was made in ensilage. The stuff used was *guár*. The result was a failure, which is not to be wondered at, for the silo was excavated in land containing over 53 per cent. of sand. Six Abyssinian ewes have been purchased in the hope of establishing a good cross with the dumba of Sind.

*Botanical Gardens, Genesh Khind, Poona.*

31. Mr. Woodrow, Superintendent of the Botanical Gardens, Ganesh Khind, Poona, carried out some experiments which deserve notice. He tried prickly pear as a manure. It was buried and covered over with earth. The pear was thoroughly destroyed, which proves the efficacy of burial to destroy the reproductive power of this pest. Mr. Woodrow thinks that the trees planted showed the benefit of the manure, but I much doubt it.

Some Nánkin cotton was grown, but the produce was poor and variable in colour.

Very good work was done in the matter of distributing graft mangoes taken from trees of celebrity. 4,300 grafts were prepared of the Alphonse and Pirie varieties, and all were sold except 214 which were the poorest. These have been planted out and are already fine vigorous young trees averaging 2½ feet high. A list is given of some of the most famous trees known, and a suggestion offered that further enquiry be made to find out others. The Agri-Horticultural Society of Poona has consented to co-operate with Mr. Woodrow and to examine the fruit of different trees and grant certificates to the owners of approved trees to enable propagators to select the best varieties. The district officers have been called on to report the name, position and character of celebrated trees. It is feared, however, that the work of distributing graft mangoes will be confined to Government officials. It will be long before private seedsmen will gain the confidence of the public sufficiently to be able profitably to take up the work, which Mr. Woodrow has shown to be popular and profitable. The character of a graft cannot be ascertained till it has borne fruit. No man will purchase a graft unless he is absolutely sure that he runs no risk of disappointment.

In the Botanical Gardens specimens of reh from different places, where this efflorescence is abundant, were tried as a top dressing to lucerne. The weight of the cutting appears to have increased with the increase of the amount of reh applied. Analyses were made. They show that all the constituents are insignificant in amount except "common salt." Now common salt supplies no essential ingredient of plant food except chlorine. The little value which salt does possess as manure is probably due to its action in the soil, where it may help to set free more important constituents. Reh is an efflorescence caused by the evaporation from the surface of the water of the soil. It is only found where the soluble salts in the soil are in large quantities. Any excess of soluble salts, even of those most valuable as manure, for instance nitrates and potash salts, causes land to be infertile. Reh is composed chiefly of salts valueless as manure, *e. g.* chloride and carbonate of soda. Where the efflorescence is found it is evident that in the neighbourhood soluble salts are abundant, even where they are not so excessive as to cause infertility. It would then be clearly unwise to use reh as a manure any where near the spot where it was collected, and I do not think it would pay any one to carry it to any distance.

Mr. Woodrow has prepared Dandelion coffee. His recipe is given in paragraph 88 of his report: "When mixed with two parts genuine (home-ground) coffee and prepared in the ordinary manner it is nearly as agreeable as pure coffee, and I think is of medicinal value, at least in dyspepsia." The dried root can be sold, packed in tins at 8 *as.* per lb. The Surgeon-General has been asked his opinion as to the medicinal properties. The average acre yield of *Typha elephantina* rose from 5¼ tons last year to 6¼ tons.

*Manilla Hemp.*—Mr. Woodrow has made some of the fibre into rope, but it is very brittle.

C.—General Principles for the conduct of Agricultural Experiment.

32. The Calcuta Conference made proposals on this subject which are embodied in the Resolution of the Government of India (Revenue and Agricultural Department), No. 48-A., dated 19th April 1884 (Resolution No. 4002 of the Bombay Government, dated 17th May 1884.)

In Government Resolution No. 6957 of 30th August 1884, my proposal to establish a Central Agricultural Farm and College at old Government House, Dápuri, near Poona, was approved, and in the same Resolution, which reviewed my scheme for the reorganization of the Bhadgaon Farm, Government directed that I should keep in view the general principles laid down in Government Resolution No. 3536 of the 9th July 1874.

It will be evident from a perusal of these papers that Government has accepted generally the principles of the Conference. Model farming will not be attempted. The action of Government will be confined to experiment; undue stress will not be laid on financial results.

The scheme of establishing a Central Farm and College at Dápuri has fallen through by reason of the purchase of the estate by Messrs. Meakin & Co. who have decided to establish a brewery there. There is no other place suitable. The committee appointed by Government to consider and elaborate the scheme have lately met, but their decision has not been yet submitted to Government.

I may say that though the Central College and Farm appear out of the question, the committee approve of a Central Farm at Poona, my head-quarters, but prefer to leave education in agriculture to the College of Science, under the Educational Department, and have prepared suggestions for the improvement of the instruction given in that institution.

The site of the Central Farm will most probably be the land now attached to the College of Science.

As soon as it is established, the question of affiliating to it the other farms in the Presidency will be considered and then the further question of establishing out-stations, attached to it for the conduct of experiments which on account of the varying conditions of soil, climate and rainfall, may be impossible or incomplete at head-quarters, or for the repetition of experiments found successful at the Central Farm.

The small farms now attached to the high school agricultural classes at once suggest themselves as suitable for conversion into experimental out-stations. There will be no objection on the part of the Educational authorities if while so converting them adequate provision is made for the practical instruction of the boys of the high school classes. This programme cannot be completed till really competent supervision of the out-stations can be secured.

### D.—Special Experiments.

33. *Crop experiments made by Assistant and Deputy Collectors* are analysed by me and submitted to Government through the Commissioners and the Survey and Settlement Commissioner.

These are designed to illustrate the incidence of the assessment fixed by the Settlement Department on the gross and on the net produce of land. They include an estimate of the cost of cultivation in each case. Two years ago an enlargement of their object was made. A new class of special experiments was ordained as contra-distinguished from the usual experiment which deals merely with a particular field and seeks to ascertain by carefully chosen small tests the yield of the crop of that field. A special experiment has for its object an estimate of the yield of an entire holding. It thus combines several ordinary experiments in order that each crop of the holding may be fairly estimated. When the gross yield has been arrived at minute enquiries are instituted as to the character of the cultivation, the effect of season, the standard of comfort of the holder, and the like. This enquiry is intended to throw light on the ordinary profits of cultivation and to collate information on many smaller points, *e. g.* the amount of seed used, the rotations of crops, the modes of cultivation, the outturn of each and all the crops of a rotation, and the differences of yield caused by variations of climate, rainfall, soil, practical skill, &c.

A special impetus will be given to these experiments by the publication of the formulæ referred in para. 8 above. These formulæ have been prepared with as much accuracy as possible, but it cannot be supposed that they are not susceptible of improvement. If the formulæ are incorrect they must be corrected, for on their correctness depends the correctness of the estimate of the produce of the Presidency. Revenue officers will have to work with the formulæ and therefore will have greater personal interest in conducting experiments than heretofore.

The resumé of standing orders on the subject of crop experiments, together with the prescribed form for showing results, is given in Appendix C as a permanent record.

34. *Cotton Experiments.*—A set of experiments designed to ascertain the total acreage and yield of cotton. Villages were selected and the cotton was

weighed as brought in from the fields by the village officers under the supervision of a Mámlatdár's kárkun. These experiments were not satisfactory, and have been partly discontinued this year with the discontinuance of the special cotton report.

35. *Ráb Experiments.*—These have been incidentally referred in para. 13 above. A separate report will be made on the results of the past year's work.

E.—Experiments on various Exotic and Indigenous Products.

*(a).—Exotic.*

36. *Cotton.*—An experiment was conducted in Dhárwár under the auspices of the Commissioner Mr. A. T. Crawford with the co-operation of the Chamber of Commerce.

The Commissioner offered prizes for the best and most carefully weeded 5-acre plots of ground grown with selected cotton seed. The plan was approved by the Chamber of Commerce and the Bombay Cotton Trade Association, each of which bodies contributed Rs. 250, while Government subscribed Rs. 500 towards the experiment. Selected seed was distributed to competitors, some of which was the produce of four and five-celled capsules. Dr. Forbes Watson had expressed his opinion that the seed from four and five-celled pods would produce a better yield and a better staple than that from the ordinary three-celled one. As to this point the experiment gave no support to the theory, though it did not disprove it. A further test has been ordered and the question will be subjected to enquiry on the Government Farms.

The prizes offered were Rs. 150, 100 and 50 for each of the 4 cotton tálukás of Dhárwár. In Hubli and Karajgi the exhibits were so poor that no prize was awarded. In Gadag the first prize was withheld. All the prizes were given in Bankápur.

The prizes were distributed by the Acting Commissioner Mr. Moore in person, who took the opportunity of addressing the assembled people at the open air meetings to point out to them the advantages of using selected seed, and doing all in their power to prevent admixture. Mr. Moore was favourably impressed with the interest in the matter displayed and especially with a spontaneous request on the part of the Bankápur people for a supply of fresh seed from America, the people asserting that they preferred the exotic to the indigenous variety.

The unexpended balance of the funds collected will be devoted to further prizes—this time in the shape of gold and silver bangles with suitable inscriptions. The action of Government will be confined to securing pure seed from the best selected crops, due attention being paid to the interchange of the produce of one táluka to that of another, and offering it for sale at market price under no conditions except that it be sown.

Prizes will be offered for the best samples of unginned American seed cotton. The competition will not be restricted by the condition of using seed distributed by the Collector. Mr. Moore's action in the matter has indirectly borne good fruit. The Municipality of Hubli has decided on his advice to establish a cotton market near the new railway station. The people of Gadag, which will soon be an important junction, have been urged to imitate them in this respect.

37. The Commissioner C. D., Mr. Robertson, was requested to consider whether a similar scheme might not with advantage be introduced in Khándesh to improve the cotton there. He gave his opinion that in the absence of skilled agency to carry it out, it would not do much good. He pointed to the action of the Government Farm in that district as an agency for producing good seed and distributing it, and then forcibly asserted that the improvement of cotton must be a point forced on the producers by the buyers and merchants themselves.

" If they insist on good cotton, unmixed and clean, they will secure it, but as long as they will buy anything which comes to the market, whether clean, pure or mixed, so long cotton will not only not improve but it will deteriorate."

In connection with this very important subject I give in Appendix D. my remarks on the Progress Report of the Bhadgaon Farm, respecting the condition of cotton in Khándesh and some further remarks made on submitting the annual report.

38. *Jute.*—The introduction of this useful fibre plant has been attempted for several years past in this Presidency; but the results are not encouraging. It has now been decided to make a further trial on the Bhadgaon Farm because in America it was found very useful to grow with cotton in belts around and in rows through the cotton. It is alleged that it has the effect of protecting the cotton from the depredations of insects owing to the extreme bitterness of its juice. It is also alleged to be an important cleaning crop almost exterminating weeds from the soil where it grows luxuriantly. It is very questionable whether these incidental properties will prove of any value here. At any rate the value should only be tested on an Experimental Farm.

39. *Manilla Hemp,* Musa textilis.—The experimental cultivation dates back to 1882. There is plenty of evidence that the plant will grow in most parts of the Presidency. The point to decide is whether it can be profitably introduced. Future trials will be confined to Experimental Farms and will be directed to ascertain—

1, whether the plant can compete with the ordinary plantain (Musa paradisiaca);

2, whether the difficulty of extracting the fibre can be overcome so as to make its production cheaper than the purchase of imported Manilla hemp;

3, whether the fruit can be utilized as a starch producer or otherwise; and

4, whether a hybrid variety can be raised between the Musa textilis and the Musa paradisiaca useful both as a fruit and as a fibre plant.

40. *The Bastard Cedar,* Guazuma tomentosa.—The trial cultivation of this tree was suggested by Mr. Stormont of Bhadgaon in 1879-80 who recommended it as road-side tree,—" a purpose to which it appears well suited, being a timber, fruit and forage tree all in one." Seed was obtained in 1882 from Bangalore. The detailed results in the Northern Division have been reported and will be submitted separately. Suffice it here to say that it has totally failed in many places. In others it has been successfully reared in well irrigated ground. In Sind the Superintendent of the Economic Garden, Hyderabad, reports that the tree is thriving. I have obtained a special account of the progress of this exotic from Mr. Stormont. It appears that a considerable number of the trees which were originally planted, have died off, especially in cases where they were not well watered from the outset. There are about a dozen on the Farm fairly established, the largest about 20 feet high with trunks 18″ in circumference. These fruited freely last season. In Dhulia in the Collector's garden there are some fine trees. These have been liberally watered. Mr. Stormont thinks it too early to give a decided opinion as to the suitability of the tree for general planting. I have ascertained that the Bastard Cedar was once widely cultivated in Bombay (Bombay Flora, 1861,) but it is not stated whether as a garden tree in watered land or as a road-side tree. The Jail Superintendent at Ahmedabad asserts that the juice of the bruised bark is used in the West Indies for clarifying sugar and suggests that it should be tried on the borders of sugar-cane land, " to enable the rayat to produce something better than *gur* from his sugar-cane." It is reported to have medicinal properties, especially in elephantiasis and leprosy.

41. *Potato Experiment.*—The Collector of Khándesh at the instance of the Commissioner, C. D., tried potatoes in four tálukás. The greatest degree of success was reached in the Bhusával Táluka where 6 maunds of sets (worth Rs. 24) yielded 18 maunds valued at Rs. 90. The tubers were large and of good colour and flavour. A prize was awarded at the Máheji Exhibition. Generally speaking the Collector thinks that a return of from 1½ to 3 times the quantity sown can be secured with ordinary care. At the Farm some years ago potatoes were successfully grown and the cultivation was taken up so readily by the rayats around that the Páchora market has a constant supply. The sale price is less than would pay further growth on the Farm.

Several English varieties were tried at the Farm, of these Champions gave the best and largest crop; "indeed a few were quite equal to potatoes grown in England."

There is an extensive cultivation of the potato in the Khed and Junnar tálukás of the Poona District. The rayats have there attained to a high degree of excellence. The system they adopt will at the earliest opportunity be studied by me.

A small experimental trial in the bed of a *nála* near the Khándesh Farm failed.

42. *The Carob Tree (Ceratonia siliqua.)*—In June 1883 at the suggestion of the Government of India experimental cultivation of this tree was ordered in the coast districts. Instructions as to the best modes of cultivating the tree, together with a memorandum by the Principal Forest Officer, Cyprus, were circulated.

In 1881 an earlier experiment had been made which seemed to show that success might be expected in the moist climate of the districts below the Gháts.

The later trials were not encouraging. In Thána the seed was received late and the trial deferred. In Kánara, Kolába and Ratnágiri little prospect of result is afforded. In Surat 150 plants at Dumas remain from the early experiment. They vary from 2 to 4 feet in height. There are trees 7 feet high in the Public Park at Surat, but only 5 survived the heavy floods of July 1883. The Forest Officer of Ratnágiri states that 720 seedlings reported to be alive in May 1882 have all since died; a progress report will be due in May 1885.

On the Government Farm, Khándesh, there is a considerable number of well established trees which fruited freely this last season.

The tree will never pay if the object of its cultivation be to produce locust beans for export. These beans are used extensively in England and elsewhere as an ingredient of cattle food on account of the large percentage of sugar they contain; but the manurial value of locust beans fed to cattle has been shown to be very low. It may prove useful in times of drought.

*(b.)—Indigenous.*

43. *Tobacco.*—An experiment was carried out in 1883 at Nadiád in the Kaira Collectorate in conformity with Government Resolution No. 8844, dated 16th December 1882, in tobacco curing. The subject of improving Kaira tobacco and curing it for the English market has been closely studied by the Collector Mr. Sheppard, now Commissioner. The various steps taken by Mr. Sheppard will be noted in the analysis of the Kaira District. Suffice it here to say that there is no doubt that the soil of Gujarát, especially Kaira, possesses the natural plant food for tobacco in a very high degree. Every variety tried has succeeded. The fault lies in the curing. Several experiments have been made in curing by Mr. Sheppard with the assistance of the promoters of the Nadiád Experimental Farm—a private institution of which the leading spirit is the Desái, Mr. Behechardás Viharidás, and which has done and is doing good work. A planter and a curer were first brought from Madura. A good crop was obtained, but the curing was a total failure. Either the curer was incompetent or else he purposely failed.

Next, the experiment of sending Nadiád men to Madras was tried. This did not succeed. The last attempt was made by the help of a curer deputed by Messrs. Begg, Dunlop and Co. of Poosa in Bengal. Mr. Caine, the curer, selected 8 acres of tobacco which was purchased. A wooden shed covered with bamboo matting was erected. Mr. Caine found that in the hot climate of Kaira (February) artificial moisture was necessary. Attempts to procure a steam boiler failed, and it was decided to hang the tobacco up as it was until the break of the monsoon. The wooden shed was strengthened as well as circumstances admitted. Mr. Caine was in March called back to Poosa. A German gentleman Mr. Jöns was recommended by Messrs. Begg, Dunlop & Co. to take his place. Mr. Jöns arrived in May 1883. He took down the tobacco, sorted it, and packed it, tied in bundles, in hogsheads.

The result was not very successful. The quality of the tobacco was on the whole favourably reported upon. The tobacco was not quite ripe when cut, and the curing shed was defective. "The measure of success obtained, however, (Government Resolution No. 9299 of 18th December 1883,) indicates that it is possible to cure tobacco grown in Kaira in a manner which will fit it for the European market." The opinions regarding the tobacco were published in the *Government Gazette* of 10th January and 29th July 1884.

Further experiment will now be left to Mr. Behechardás. He has secured the services of Mr. Jöns for next year.

44. *Wheat.*—The great importance of improving this staple for export has been fully recognized. Up to the present time the export demand has been principally for varieties, which are not grown in the Bombay Presidency. Bombay wheats are mostly hard and have as yet not found their way into the English market to any great extent. Much encouragement has been given by a trial made under the orders of the Secretary of State by Messrs. McDougall Brothers. From the results of this experiment it is clear that hard white and hard red wheat both possess special characteristics which fit them for the English market. A short summary of the results of Messrs. McDougall Brothers' experiment has been drawn up by this department for circulation in the wheat-producing districts. It is being translated into Maráthi, Gujeráti and Kánarese.

The Bombay Chamber of Commerce in pointing out to Government the evil results of growing hard and soft varieties together and the great desirability of preventing admixture of other grains, dirt and foreign substances in wheat intended for export, considered the best means of securing an improvement in its cultivation. The Chamber suggested that prizes should be given for the best farmed fields and that selected seed of absolutely pure and unmixed wheat should be distributed over the Presidency.

A conditional contribution of Rs. 1,000 was made together with promise of help to procure good seed. Government in accepting the offer has allotted Rs. 10,000 yearly towards measures of improvement.

I am of opinion that the Chamber has not been correctly informed regarding the admixture of hard and soft varieties. I have found nothing to support the theory that the cultivators wilfully or ignorantly sow mixed seed. I believe that the so-called admixture is principally, if not entirely, due to climatic influences. Some evidence has been adduced, which may be found in my report No. 322 of the 2nd April 1884, printed in the *Indian Agriculturist.*

A reference from the Government of India dealt with the question as to how far the colour of wheat is affected by the quality of the soil and character of the cultivation.

The point is one for careful study and experiment, and is intimately connected with the further question as to the tendency of hard varieties to become soft and *vice versâ.* As stated in my reply to the reference I am arranging for a thorough and systematic test.

Other charges brought against the wheat growers are quite justifiable. The most sure and certain means to secure a cleaner sample is the introduction of steam machinery for threshing and winnowing. Steam threshers which use wheat straw as fuel are far more likely to suceeed than threshers worked by hand or bullock-power. Such would not justify the employment of trained hands and no suitable machine can be kept in order by the village craftsmen.

I have hope that I shall be able to induce Messrs. Bulmer, Lawrie & Co. of Calcutta to set up one or two steam threshing machines next season.

45. Under the sanction accorded by Government, I purchased 5 Cawnpur winnowers, but I was disappointed. The Bombay merchants have in use a winnower of a better type. As long as they clean the wheat before bagging it for shipment it will be wiser to allow the insufficiently clean produce to come to Bombay than to attempt to put inferior machines into the hands of the cultivators and small up-country traders.

46. In order to carry out the suggestion of the Chamber to supply absolutely pure seed, I was placed in communication with Messrs. Ralli Brothers, Bombay. There was much difficulty in deciding what varieties are most likely to succeed in the different districts. As far as I was able I procured samples from districts whence indents had been received and decided after inspecting them which variety to send. The Chamber incidentally suggested the desirability of attempting to grow the fine soft white variety of the Central Provinces. This suggestion has received attention, but I thought it wiser to confine the use of the soft white to experiment on the Bhadgaon Farm and to one or two districts where an inferior variety of soft white is now grown than to supply it to districts where the wheats are hard or red. Many district indents were received too late. It was apparently forgotten that the seed had to be all hand-picked.

The amount of seed distributed is as follows[1] :—

| | | |
|---|---|---|
| 1. Soft white ... ... ... ... | 15 | Indian maunds. |
| 2. Do. red from Akola ... ... ... | 40 | ,, |
| 3. Hard white from Broach and Nagpur . | 50 | ,, |
| 4. Hard red .. ... ... ... | 75 | ,, |
| | 180 | |

or an amount sufficient to sow over 300 acres. It will be a question next year whether the same system of supply should be repeated or whether it will not be better to purchase locally the produce of the crops grown from selected seed.

The plan of giving prizes for the best farmed fields though theoretically good is practically very difficult if not impossible.

The promoters of local shows may perhaps find a feasible way of giving effect to the suggestion.

47. Of the allotment of Rs. 10,000, one quarter has been apportioned to Sind. The Commissioner, after pointing out the serious difficulties in the way of carrying out the scheme of the Chamber of Commerce, expressed his opinion that some good will result, from the exhibition at the horse-shows, of samples of good export grains, but that the distribution of selected seed on easy terms to the Zamíndárs is the best course for adoption. He has directed this to be done; at first Zamíndárs who are known to be careful cultivators will be selected. When a genuine demand for better seed has been established, Government intervention and assistance may be dispensed with.

48. The present condition of the export trade in wheat will not be evident from the report of the Commissioner of Customs, because, the report will refer only to the year ending 31st March, a date on which the last season's harvest had scarcely begun to arrive in Bombay. Heavy rains last year in October delayed sowings, but generally speaking the crop was above the average, though as far as I have seen inferior in quality. I have obtained from the Commissioner of Customs details of export down to the end of August (Appendix E). From this it will be seen that there has heen a marked falling off.

Comparing the figures for the 8 months ending August 31st for five years the totals are seen to be—

| | Tons. |
|---|---|
| 1880 ... ... ... ... | 73,349 |
| 1881 ... ... ... ... | 263,729 |
| 1882 ... ... ... ... | 316,718 |
| 1883 ... ... ... ... | 370,873 |
| 1884 ... ... ... ... | 272,153 |

The very high rate of export for the past three years has thus not been maintained. I have not been able to ascertain the reason. No doubt there

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[1] Actual amount distributed ... ... .. ... ... 215½ Indian maunds.

*Cost.*

| | | | | |
|---|---|---|---|---|
| (1). Price of wheat including charges of carriage on that bought up-country ... | Rs. | 739 | 10 | 9 |
| (2). Cleaning charges ... ... ... ... ... ... | ,, | 1,100 | 13 | 0 |
| (3). Cost of bags ... ... ... ... ... ... | ,, | 24 | 2 | 0 |
| (4). Cost of carriage from Bombay to destination ... ... ... | ,, | 131 | 8 | 9 |
| | Rs. | 1,996 | 2 | 6 |

ere large stocks at home which had to be worked off. The price of wheat ıoreover has been very low in England. The recent harvest in that country as been unusually fine, and a check on export may continue.

49. *Cryptostegia grandiflora.*—This creeper had a full trial in the municipal gardens at Karáchi. It was tried at the Botanical Gardens, Ganesh Khind (paras. 38—48 of report of 1881-82). The object is to ascertain whether India rubber can be obtained from it profitably. It is abundant in Poona and no doubt in many other places. The experiments seem conclusively to show that it will not pay to cultivate the tree, but it may be profitable to tap wild trees in forest reserves. To test this point a newly invented knife and specially made tins for catching the juice have been obtained from Ceylon, and Mr. Woodrow in Poona is using these to tap isolated plants.

### F.—Forecasts of Wheat and Cotton.

50. Forecasts have been directed regarding these two crops, selected, as being the most commercially important, which will take the place in the case of cotton of the annual report which has been discontinued, and which will give more detailed information than the weekly crop and weather returns published in the *Gazette*. The object of the forecast will be to give at as early a date as possible the acreage sown together with the chief causes of increase or decrease—to follow this up by monthly condition reports showing the effect of the weather, the prospects of these crops and the state of the markets, and lastly, on suitable dates on which the prospects may be considered tolerably well assured, to estimate the yield by the help of the district reports and the prescribed formulæ.

This forecast will be followed by harvest reports which will deal with the nature of the harvest, export demand, local prices and quality of the year's produce.

In future in the annual report of the Department the statistics of the year will be incorporated. These statistics will of course embrace other crops, until the Circle Inspector Establishment has been extended to all the districts of the Presidency. The figures of the forecasts will at best be approximate and the information meagre; but punctuality in submission of district reports, which is essential, seems more than all to call for the desired extension.

### G.—Ensilage.

Although while in England I was not able to visit any silos, I had heard and read enough on the subject of ensilage to determine me to give it a trial in this country. Shortly after my return to duty in India, an opportunity offered itself. Colonel Caldecott, Superintendent of the Gunpowder Works, Kirkee, placed a large iron tank at my disposal. I obtained the materials for ensilage from the College of Science Farm and from the Botanical Gardens, Ganesh Khind. A small sum of Rs. 150 was sanctioned by Government to meet incidental expenditure. The labour required to fill the tank, collect stones for weighting the ensilage, and building a thatch to cover the silo, was supplied by Colonel Caldecott, who, in fact, supervised not only the filling but also the after-distribution of the ensilage. It was only by his assistance that I was able to carry out the experiment.

The experiment was intended to show whether bájri and jowári straw, not cut up into half inch lengths as is usual in America, could be preserved in an iron tank all above ground. No attempt was made to estimate the cost of making ensilage. I considered that if under these circumstances a partial success could be secured, it would prove the practicability of ensilage in India.

The tank was cylindrical and made of boiler plate iron. Its cubic contents were 7,000 cubic feet.

The stuff put in consisted of common jowári (Sorghum vulgare), black jowári or Chinese sugar-cane (S. saccharatum), and bájri (Penicillaria spicata). The area cut was 11½ acres. The weight of the green stuff was estimated at 61 tons, but this was too high. The jowári of both kinds was cut at the most favourable

time, *i.e.* just as it was coming into flower. The bájri was further advanced and not so succulent and not so suitable for ensilage.

The filling took five days (September 17th—21st) though every effort was made to hasten the work. I am now of opinion that there was no necessity for haste. I had no chaff-cutter or other means of cutting the stalks into short pieces and I preferred to pit it whole, because I am convinced if this cutting up is essential, ensilage of such substances will hardly pay. Chinese sugar-cane contains a large percentage of sugar. It has not been grown with success in this neighbourhood, except as a fodder crop.

The weather was fine and bright.

The weights placed over the green stuff consisted first of iron boiler plates to make a flat surface and then of boulders heaped on the plates. The weighting reached the amount of 200 lbs. per square foot.

The stuff sank considerably under this heavy weight, and it was afterwards found that in places the weight plates had lodged on the protruding margins of the plates forming the tank. This admitted air and allowed fermentation to go on and was the chief cause of the only partial success of the experiment.

The temperature of the silo was watched, a thermometer being let down by an iron pipe in the centre. It rose to 120° F. during the first three days after the silo was closed, and then fell to that of the outside air.

After the monsoon was over the thatch was removed.

Colonel Caldecott also made a silo of a masonry tank inside the Gunpowder Factory walls and filled it with grass. The grass was cut and pitted in pouring rain. It was not put in regularly. One quarter was filled and weighted, then another, and so on. Owing to this the edges of each quarter were not well packed. Air got in and caused damage. This tank was below ground and was not water-tight. Colonel Caldecott was obliged to pump the water out at intervals of half an hour for three weeks and at longer intervals for another three weeks. This must have caused serious diminution of the value of the ensilage, because much nutritious substance must have been drawn off dissolved in the water.

The temperature of this tank never rose much above that of the outside air.

52. Both silos were opened on or near the 10th January. The iron tank was closed again, but the masonry one was kept open till the 10th June by which date the ensilage was all consumed. This tank received 60,480 lbs. of very wet grass and gave 49,486 lbs. or 82 per cent. of ensilage. No deterioration was observed in the quality of the ensilage during the time the tank was kept open. On opening we found the upper layers mouldy. Lower down it was good in colour, but very hot and steaming. There was a decided sour smell.

The large iron silo was opened only tentatively. There was a strong smell in its vicinity even before the weights were removed. I had not been able to visit it since November. This smell increased when a plate was taken off. It was so strong that it was decidedly disagreeable. It was described by the gentlemen present as resembling the combined odour of a tannery and a brewery. The upper layer of about 2 inches was rotten and useless, but below that the colour was excellent, and olive green. The stalks of the Chinese sugar-cane tasted as sweet as when they were put in. No doubt, the sugar had undergone no fermentation. This is an important point. There was no heat and no steaming as in the case of the smaller silo. All round the edges air had got in and the stuff was bad. A herd of cows and buffaloes which were grazing around ate up all that was thrown out, even that which appeared quite rotten. The hot stuff from the masonry silo was after a few minutes' exposure eaten readily by some well fed Gujarát bullocks, and by two horses that were at the silo.

53. Colonel Caldecott thus describes the results:—"When I commenced feeding my bullocks and cows from my silo in January there was a marked improvement in their condition, and this continued for some time. In fact when I began to feed them from the big iron tank they were as fat as pigs. After that they

began to fall off in weight, but I do not consider that necessarily the fault of the ensilage in that tank, but rather the heat of the weather. As far as I can form an opinion from this year's experiment, I should feel inclined to think that, in this country where there is so much grass available, it is not worth while making bájri and jowári into ensilage. I also think that the two latter make too rich a food to be used unmixed with other forage."

The large silo was finally opened on 8th April. There had been a heavy shower of rain on the 6th, but Colonel Caldecott covered the tank with tarpaulins.

54. The ensilage was given to Colonel Griffith, Assistant Commissary General (Transport), and to Mr. Woodrow and Colonel Caldecott and Major Seton, Executive Commissariat Officer. Colonel Griffith had been present at the opening of both silos in January and in April. He has favoured me with a detailed account of the experiments made by him, from which I extract the following:—"The ensilage was of good quality, sweet and wholesome." I may remark that Colonel Caldecott only issued to the Commissariat the best stuff. The damaged ensilage was greedily devoured by the cows and buffaloes which crowded round the tank.

*1st. Experiment with an Elephant.*—200 lbs. of ensilage were given daily from 10th April without any flour or kadba. Finding that he quickly consumed the ration and still seemed hungry, it was increased on the 12th to 300 lbs., and again on the 19th to 400 lbs. From the avidity with which he ate it, it was supposed that it was not satisfying. This ration was continued till the 25th April when the elephant was measured. The measurement disclosed a falling off of 5 inches round the fore-arm. "It was evident," says Colonel Griffith, "that the ensilage was not suitable as a ration, and I therefore directed that he should revert to his ordinary food." The elephant ate all the heads and leaves of the ensilaged stuff but not all the stalks. It would have been better if other measurements had been taken. It is not stated whether the elephant showed other marks of bad condition.

*2nd and 3rd Experiments.*—Six mules receiving 15 lbs. ensilage each, over and above the ordinary grain ration for 42 days; 6 others receiving 30 lbs. ensilage without the usual grain ration for the same period.

Of the first six 2 only fell off at the end of the experiment, while each of the other four which fell off after 24 days, pulled up again after 8 days on the same ration and without any decrease of work. The same cannot be said of the other 6, all of which, with one exception, fell off considerably. The final weight of the mules was not taken as they were suddenly ordered off.

They all took to the ensilage very kindly, and it was found by damping the dry portions with water that the mules would eat what they had previously left unfinished.

"My belief is that had the experiment been carried on for a period of 3 months the mules which received it as a substitute for dry grass would have put on considerable weight, but I am doubtful as to the others, who though receiving a double ration of ensilage received no grain. The general appearance of all the mules was greatly improved, even of those which fell off in weight. Their coats shone and they became as sleek as mice."

*4th Experiment.*—"During the whole of May and 8 days of June four sick and weakly mules received ensilage in addition to their ordinary ration with most favourable results. Their condition greatly improved, and that was without doubt attributable to the ensilage."

55. Mr. Woodrow reports that he received 4,200 lbs. of ensilage which was fed to 10 bullocks in regular field work at the rate of 20 lbs. each daily with 2 lbs. of gram. The cattle were in poor condition when the ensilage was begun in April. After three weeks they had greatly improved and were in "fine working condition." Ensilage was stopped, because the supply was required for the Commissariat experiments above referred to.

56. I have unfavourable opinions also to notice.

Some of the ensilage was issued to the Commissariat Farm at Alegaon.

Six slaughter cattle and 10 sheep were fed at the rate of 10 lbs. to the former and 1 lb. to the latter for a month. The cattle are reported to have shown much repugnance at first but latterly they showed a preference for it. They lost in weight. The sheep would not or could not consume the quantity given.

The final result is thus described :—" Every part of the cattle and sheep offals bore evident signs of the effect of the forage. They were found to be quite black. Even the kidney fat of the cattle showed a slight tinge of purple colour."

As to this experiment I may remark that the sheep left more than half their ration untouched. They thus had to live for one month on ½ lb. of ensilage a day —an amount of food totally insufficient to keep them in condition however good. No scientific *post-mortem* examination was made ; without that no satisfactory explanation of the abnormal appearances is possible.

57. On the whole it is clear that even whole bájri and jowári can be preserved in an iron tank above ground; *à fortiori*, therefore, grass which packs more easily can be kept in a cool masonry tank wholly or partially under ground. The experiment also proves that even inferior ensilage is a good food, especially in partial substitution of the ordinary food of animals.

58. I have now obtained sanction for and undertaken more searching experiments.

First I have through Mr. Woodrow, Lecturer in Agriculture and Botany at the College of Science, caused two field silos to be made in imitation of Captain Wingate's experiment. One is excavated in black soil overlying pasty clay; the other in hard murum.[1] The former has been filled with good grass about 10 tons cut before flowering, well trampled down and covered with the excavated clay. Between the grass and the covering a layer of tág (Bombay hemp) was put in to keep the clay from mixing with the grass. In the other bájri has been pitted. The silo is half filled with bájri cut in ½ inch lengths with a chaff-cutter. The chaff-cutter was broken and the upper half was filled with whole bájri. I think that these two experiments will test Captain Wingate's statements. I must notice that no intimation is given by this officer as to the kind of soil suitable for a field silo. It certainly will not succeed in sand. An experiment made on the Hyderabad (Sind) Farm proved this. The result was decomposed vegetable matter.

59. It may succeed in hard clay or murum, perhaps in first rate black cotton soil, which, I may notice, is the soil preferred by the people for " grain-pits." Field silos offend against the principles of ensilage. Two cardinal points are—the exclusion of air and water. If, however, field silos succeed, ensilage will play a

---

[1] The details are—

*Clay Silo.*

| | Rs. | a. |
|---|---|---|
| Excavation, 1,368 cubic feet, at 8 ans. per 100... ... ... | 6 | 14 |
| Cutting and loading grass, 22 men, 5½ days, at 4 ans. each ... | 30 | 4 |
| Carting 52 loads, 2 miles, at 8 ans. per load ... ... ... | 26 | 0 |
| Pitting the grass and weighting with excavated clay, 5 men, 5 days ... ... ... ... ... ... ... ... | 6 | 4 |
| | 69 | 6 |

*Murum Silo.*

| | Rs. | a. |
|---|---|---|
| xcavation, 1,368 cubic feet ... ... ... ... ... | 13 | 11 |
| utting bájri, 4 acres, with scythe ... ... ... ... | 3 | 0 |
| oading and carting ... ... ... ... ... ... | 12 | 0 |
| utting part with chaff-cutter, 4 men, 3 days ... ... ... | 3 | 0 |
| itting and weighting with excavated murum ... ... ... | 6 | 4 |
| | 37 | 15 |

more important role among the rayats than I anticipate. At present I do not see any likelihood of good coming of making ensilage of bájri or jowári; when grown as grain crops these staples must seed and become less succulent and more woody. In that state they had I think better be preserved as the people now preserve them as dry fodder. Jowári and bájri grown as fodder crops are too valuable and too much in immediate requisition. But I do see a great prospect for grass, and it is to foster the practice of ensilaging grass that I have undertaken, with the aid of Colonel McRae, Conservator of Forests, Northern Circle, an experiment on a large scale.

If grass in good kurans (grass lands) is cut in September before it has come to maturity, and put into silos, an aftermath of considerable weight can no doubt be secured. The ensilaged stuff can be kept as long as may be required and will in places, especially where green food cannot be grown in the hot weather, be of the utmost value.

The initial cost of making a silo is heavy, but if care is taken to use good materials, the recurring charges are comparatively light. It should cost no more to cut grass for ensilage than for the dried grass, falsely called hay. Carriage is saved by having the silo close to the kuran. It is cheaper to carry concentrated ensilage than loose grass. Stacking and thatching the stack are, I believe, very little less costly than pitting in a silo. The cost of watching is saved, the risk of fire avoided. With these views Colonel McRae and I have built a silo 40′ × 20′ × 10′ (deep) at the foot of a hill in the Bámbhavda Forest Reserve near Poona. It is situated on sloping ground, the upper edge being level and the lower 7 feet above the level. The excavation and construction have cost Rs. 400 in hard murum. The situation ensures good drainage. We have put in 76½ tons (carefully weighed) of first rate grass, kurka, márvel and sherdi. The cost of cutting, carrying, treading, weighing and weighting, has amounted to Rs. 300. This item could, by contract, have been considerably lessened. We have covered the grass with bamboo matting (Rs. 10) and placed a layer of good teak boards (2 inches thick). Over this the excavated murum with boulders and loose stones have been piled to secure about 200 lbs. to the square foot. The teak boards cost Rs. 650, a high figure, but they will last long and will fetch a good price if sold.

| Initial expenditure— | Rs. |
|---|---|
| Silo ... ... ... ... | 400 |
| Teak boards ... ... ... ... | 650 |
| Total ... | 1,050 |

Recurring expenditure, say Rs. 200. If 10 per cent., a liberal allowance, of the initial outlay is charged against the annual cost, this cost will be about Rs. 300.

60. The grass of this kuran usually is sold for Rs. 400 clear. Colonel McRae hopes that the aftermath with what is left uncut will sell for Rs. 200. We could not get the grass cut earlier, else the aftermath would be worth more.

| Anticipated results— | Rs. |
|---|---|
| Cost of grass *minus* value of aftermath ... ... | 200 |
| Share of initial cost ... ... ... ... | 100 |
| Cost of cutting, &c. ... ... ... ... | 200 |
| Total ... | 500 |

Receipts (allowing for shrinkage), say 60 tons of ensilage worth 12 *as.* (say) per 100 lbs., Rs. 1,008. Clear profit over and above the usual receipts (Rs. 500).[1] It remains to be seen how far these anticipations will be realized.

We trust that the Commissariat Department will purchase the ensilage and that this experiment will lead to an annual departmental demand and supply between the Commissariat and Forest Departments. If ensilage thus gains a

[1] The grass left after filling the silo fetched Rs. 261 against the final bid of Rs. 450 before the silo was decided on.

firm footing, large contractors may adopt it. Silos of this kind are, of course, beyond the power of ordinary farmers.

61. With the canal irrigation and the unusual amount of lucerne and other fodder crops about Poona, the profits may not in this case be high. I would state my opinion that in the Konkan, where grass is especially abundant in the monsoon and where the fodder from rice straw is very inferior, there is a fine field for ensilage. Without doubt 2 or 3 cuttings could be got. Again, in Bombay the consumption of grass is very great and that offered for sale of a very inferior description. I trust that the municipality or contractors may give the subject attention. Till I have seen the results of field silos, I will not undertake to say anything as to the possibility or probability of the system finding its way among cultivators of the peasant proprietor classes, but enough has been demonstrated to awaken the self-interest of large landed proprietors, especially native chiefs who possess extensive grass lands and who yearly cut and stack large quantities of grass gone to seed, coarse, hard and innutritious, but who can by building pakka silos increase and improve their fodder.

## H.—Crop Diseases, Blights, &c.

62. I will only refer to such diseases, &c., as have been specially brought to my notice.

### *I.—Rust in Wheat.*

63. The publication in the Royal Agricultural Society's Journal of the Consulting Botanist's paper on wheat mildew, which showed the connection between that disease, rust in wheat, and the æcidium of barberry led to an enquiry ordered by the Government of India as to whether the allegation that rust in wheat is more common in fields in which mustard is grown than elsewhere. The enquiry resulted in the collection of a large number of opinions on the special point referred as well as on the comparative liability of different varieties of wheat and in the collation of all information available on the subject of rust.

Colonel Laughton analysed and summarized the opinions. The summary, together with a few selected reports, was printed with Government Resolution No. 9504 of the 26th December 1883.

The conclusions arrived at are thus stated:—

1. That mustard is often grown with wheat, but that it does not affect it in any way.
2. That rust is most prevalent when cold northerly and easterly winds blow, *i. e.* at the time wheat is ripening.
3. That opinions are divided as to whether the disease is contagious or not.
4. That they are also divided as regards the greater or less liability of irrigated varieties.

The most interesting fact adduced is the unexplained connection between linseed and wheat.

Rust has been rare during the past season and it was difficult to procure specimens of rusted wheat. A disease on linseed, evidently the same as that noticed by Colonel Sleeman in 1836, was however common. This disease did not accompany rust in wheat close by. I have collected specimens and sent them to the Consulting Botanist of the Royal Agricultural Society. No reply has been yet received. The specimens sent were:—

1. Wheat attacked with rust.
2. Linseed with unidentified fungoid disease which may be a stage of rust or mildew or it may be an æcidium similar to that of the barberry æcidium.
3. Hariali, a grass (Cynodon dactylon) covered with a fungoid disease.

4. Barley diseased with rust.

5. Dub grass (? Poa cynosuroides) similarly diseased.

6. Diseased lucerne. } These are totally unknown.
7. Diseased tobacco. }

*II.—Blight.*

64. Blight was very harmful during the past season, on cotton and kardai (Carthamus tinctorious) especially.

*III.—Broom Rape.*

65. An enquiry in Madras proved that a parasite bearing the local name of 'bodu' was very injurious to tobacco. I have identified the same parasite in Gujarát. It not only attacks tobacco but the brinjal and other plants of the same natural order as these two. Its scientific name is Phelipœa indica.

*IV.—Gram Disease.*

66. In gram, especially that sown late, a peculiar withering of an apparently well developed leafy plant was noticed in several places. In the small plot of land attached to the College of Science this failure of a promising crop was most noticeable. The field was partly manured and partly unmanured. Portions adjoined irrigated sugar-cane and so received considerable moisture by percolation. Other portions were distant from water. Some of the crop was under the shade of trees, some quite in the open. Yet the failure of individual plants all over the field was noticed. It began by a slight discoloration of the leaf. On the second day the whole plant was yellow and sickly. On the 3rd or 4th it completely withered away. I pulled up several sickly plants, but could find no trace of white ants. Then I noticed a peculiar excrescence on the root fibres. I afterwards found that the larger grown and healthier the plant, the larger and more numerous were these excrescences. They resembled a cock's comb. I have preserved one plant, on the root fibres of which are collected 20 or more large growths. On enquiry some cultivators alleged that the growth was perfectly normal. Others had never noticed it. If gram is pulled the bulbous excrescences are separated and remain in the ground.

Apparently the growth was normal and consequently I cannot satisfy myself as to the reason of the failure of the crop I refer to, and many similar crops. Wherever I carefully dug out gram, I found the excrescences. Blight had not touched gram and could not have caused the failure. I found many plants of gram covered with aphidis (Maráthi *Mowa*), but they had clearly got on the gram from the Kardai close by. I discovered a caterpillar which made its way into the ripening pod and escaped after devouring the contents. I received specimens of this caterpillar from several places, but it was not the cause of the failure of the crop which I have referred to. Much late sown gram came to nothing simply because the heavy rains had so soaked the ground that it gave the gram no chance. This excessive moisture in the soil made the jowári over large tracts a stunted and often grainless crop. In a jowári field belonging to the Rev. Mr. Fairbank, American Mission, the crop was well ploughed between the rows. It was the only decent crop in the neighbourhood. I judge from this that the consolidation of the land resulting from the heavy rains was the chief cause of its failure. The people hoe the young jowári crop to cut weeds, but this hoeing has little effect in loosening the soil.

*V.—A Rice Grub.*

67. The ravages of a rice grub in the Thána District are described by Mr. Loch, Assistant Collector. I cannot do better than quote his description :—

"In the villages of Bhimgaon Budrukh and Khurd in the Bassein Táluka, the rice crop was almost entirely destroyed by the grub, which I mentioned in my report last year, and in many other villages in Bassein and Máhím and in a few Dáhánu villages much damage was done by it. The young rice, which is attacked by the grub, grows up high and apparently strong, but the ear never fills and turns white, and in the centre of the plant is found a small grub, about half inch long, of a yellowish white colour. The rice crop in the Bhimgaon village has now been destroyed by this grub for 3 years in succession."

Specimens of the beetle were sent to me at the end of last season but they were too broken to be sent for identification.

*VI.—Locusts.*

68. These insects have not apparently done damage during the year under report, but I have not had anything to do with them. Such information as is available will be found in the General Administration Report.

I.—Improved Agricultural Implements.

69. I have referred to the Cawnpur winnowers and the new plough brought out by Mr. Stormont at Bhadgaon.

70. I may mention an improved 3 roller sugar-cane mill, all of cast-iron, which has been invented by a Poona manufacturer. Its sale price is Rs. 200. Several have been sold and a large number are let out on hire. It has received much encouragement. A trial will be made by this department at the first opportunity.

71. Two of Messrs. Massey and Company's improved ploughs have been purchased by rayats in the Nagar District. The Local Fund Board of Ratnágiri have purchased several ploughs and other implements from Madras, Cawnpur and elsewhere for experimental trial.

72. A trial was made at the Bhadgaon Farm with Messrs. Gordon and Company's bullock gear. The machine was principally designed to work saw-gins and was calculated to supply a motive power sufficient to drive 4 gins aggregating 56 saws. The trial I made was with 3 improved Dhárwár saw-gins each with 18 saws. The gear was worked by 4 pairs of strong bullocks. It worked evenly and well, though scarcely more than 50 revolutions were made per hour. At this rate the cattle walked one mile per hour. As regards the strength of the apparatus the trial was not very severe.

I calculated the cost of the work done by the machine and compared it with that of hand and steam-power with the following result:—

| | Per Rupee. |
|---|---|
| Bullock gear... ... ... | .... 100 lbs. clean cotton. |
| Hand-power working saw-gin ... | ... 106½ |
| Country charka ... ... | ... 40 |
| Steam-power ... ... | ... 220 |

It is evident from this that the bullock gear cannot compete with steam-power and it is doubtful, when all the chances of continued breakage are considered, whether it would hold its own against hand-power.

Steam-power is now rapidly extending. The roller gin has superseded the saw-gin, because the indigenous cotton is getting the better of the American cotton.

The bullock gear has no place to fill in connection with cotton. It may be found useful for other purposes.

The small superiority shown by the bullock gear over hand-power would have necessitated further trial had it not been clear that the point was not important, because the saw-gin, whether worked by hand or bullock-power, is at present out of favour.

A full report of the trial may be found in Government Resolution No. 3067 of the 15th April 1884.

VI.—CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

73. As regards attempts to improve the breeds of cattle in this country I think that the first step is to collect information respecting the various breeds and their excellences and defects. It is not an easy matter. There is hardly a pure breed and in each district the names of breeds change. I took advantage of the collection of animals at the Nagar and Máheji Shows to take notes on the subject. Since that date the district officers have submitted reports on the various breeds as far as they can describe them. Much valuable information is now collected.

I propose to visit as many shows as possible this year. I shall then at any rate be able to describe the principal breeds, and to decide what steps are advisable in the direction of improvement.

74. A Veterinary Hospital and College under the Educational Department has been sanctioned (Government Resolution No. 4421 of the 2nd June 1884) and a hospital for practice in connection with the Veterinary course at the College of Science, Agricultural Branch, under the Professor of Veterinary Science.

The former institution will provide for instruction to all students desirous of making cattle practice their profession. The latter will supply the practical element which was wanting in the Veterinary instruction at the College of Science.

VII.—AGRICULTURAL AND FISCAL STATISTICS.

75. Till the compilation of the district returns of agricultural statistics have been entrusted to the Agricultural Department, this head must be left blank.

VIII.—TRADE AND TRADE STATISTICS.

76. Not yet taken up.

77. I have now touched on all the prescribed heads. The report is incomplete and sketchy. I intended to add to it a succinct account of the season of 1883-84 and the latest information available regarding the season which has now commenced. The date of the report was fixed for the 1st November, chiefly in order that it may include agricultural statistics which would otherwise be published only with the Commissioner's Jamábandi Reports in January or February. This late date makes it advisable to describe in the report the prospects of the new season as far as they can be estimated. But as season reports are not yet received by me and as I have no outside establishment to supply any information beyond that contained in the published weekly season and weather reports, I prefer to omit all reference to a subject of such great importance.

I have the honour to be,
Sir,
Your most obedient Servant,
E. C. OZANNE,
Director of Agriculture.

## APPENDIX A.

As far as materials are available the proposed agricultural accounts of British districts should contain information on the following points :—

### *I.*—Physical Geography.

*Aspect.*—Is the country flat, rolling or rugged; bare, wooded or forest-clad; classes and quality of soil; is the water-supply scanty or plentiful; are the villages large and far apart or small and close together; some notice of the climate, rainfall,* and temperature; rivers, hills.

### *II.*—Products.

Chief products; mineral, animal and vegetable.

### *III.*—Population.

Total number; Hindus, Musalmáns and other races; males, females, children; educated, uneducated and illiterate; occupations of the people.

*Hindus.*—Name, strength, occupation, and condition of each caste.

*Musalmáns.*—Divisions, classes, and general condition.

*Names and strength.*—Of the castes, races, and classes of people who

(1) are likely at once to become destitute in cases of famine,

(2) have resources that will last for some months without help,

(3) are in a position to pass through the trial unaided by Government.

### *IV.*—Capital and Trade.

*Capital.*—Classes of money-lenders, bankers, and capitalists; rates of interest, character and condition of capitalists. Classes and condition of borrowers.

*Trade.*—Means of communication, articles of export and import, and manufactures.

### *V.*—Agriculture.

Number supported by agriculture, classes of people engaged in agriculture, their character and condition as agriculturists.

*Soil.*—Varieties and productiveness.

*Holding.*—Size, extent of land cultivated by a single pair of oxen; what would be locally considered a large, a middle-sized, and what a small holding.

*Crops.*—Returns of crop area for as many years as information is available, a list of the crops which make up the early harvest and the crops which make up the late harvest.

Seasons of sowing and reaping; sorts of land suitable for various crops; acre yield; improvements in the quality of the stable crop grown; changes during the last twenty or thirty years in the grain-growing lands; how far have better grain and other crops taken the place of poorer crops.

*Stock.*

(*a*). *Live-stock.*—Statistics of oxen, cows, buffaloes, horses, sheep and goats and asses for as many years as returns are available. Information regarding breeds, food, prices and uses.

(*b*). *Dead-stock.*—Returns of carts and ploughs for as many years as details are available. Name, cost, description and sizes of each kind of field tool.

*Manure.*—Articles used as manure; what classes of soil and crops require manure; cost of manuring an acre of land; what classes of cultivators use manure; sufficiency or otherwise of the supply.

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* Full details of rainfall are given under Seasons.

*Irrigation.*

Means of irrigation, rivers, lakes, canals, wells; to what extent is irrigation carried on; what crops require irrigation; cost of irrigation.

*Tillage.*

Modes of husbandry; defects and their causes.

*Experiments and Shows.*

(1). Tools and appliances.

(2). Crop (*a*) yield and (*b*) cultivation.

(3). Model and experimental farms.

(4). Cattle and horse-shows.

(5). Exhibitions.

*Seasons and Harvests.*

(1). Rainfall.

(2). Famines.

(3). Insect and other plagues, *e. g.* blights, locusts, rats.

VI.—Survey Rates and Land Tenures.

*Land Area.*—Details of surveyed and unsurveyed lands—arable, unarable, held for tillage; forest, roads, building sites, &c.; details of dry-crop, garden, and rice land as per statement annexed.

*Survey Results.*

Rates of rent of the different varieties of land with a brief explanation of their respective crop-bearing qualities. Rates before the original survey settlement, under the original survey settlement, under the revised survey settlement, the condition of the district at the time of transfer; land management of the district at the time of transfer; chief changes in the system or in the rates of assessment between transfer and first survey.

*Produce Prices.*—For as many years as details are available.

*Revenue Remissions and Balances.*—For as many years as details are available.

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## APPENDIX B.

*Directions regarding the conduct of experiments on the Government Farms.*

1. The Superintendents will at a convenient date before the commencement of the cultivating season draw up a scheme of experiments for the ensuing year and submit it to the Director of Agriculture.

2. Purely experimental plots should never be less than $\frac{1}{10}$ acre (4 gunthás). It will be better if the plots are larger, but of whatever size they should always be multiples of 4 gunthás. If owing to unevenness of divisions of fields small corners or irregular pieces remain over and above the marked plots, they should be utilized in the most profitable manner possible.

3. It will be some time before this provision can be conveniently and thoroughly carried out. Experiments to be productive of reliable results may have to extend over a number of years, and regularity of the plots is of the first importance to ensure a proper comparison of the results of one year with that of former years.

It is not intended that the provision should so operate as to cause a difficulty in ploughing and preparing the land. The corners of the plots should be permanently marked and a small space left between each plot. These inter-

spaces may without confusion be ploughed or harrowed with the adjoining plots; only at sowing time the boundaries must be kept distinct.

4. All experimental plots must be in duplicate. Better if in triplicate.

5. Each series of experiments must comprise an exemplar plot in duplicate without the special feature which is the subject of the experiment. This is necessary for the sake of comparison. Thus if a particular rotation is being tested, the exemplar plot will contain the chief crop of the rotation alone and year by year in order that the effect of the rotation on that crop may be estimated at its true worth.

6. The farm should be divided into a purely experimental and a general portion. This division must be made gradually. The purely experimental area will be small at first and it will be gradually expanded.

7. Large fields sown with selected seed, or cultivated in an approved method, need not be considered part of the purely experimental area though the cultivation may partake of the nature of experiment.

8. In displaying the results of experiments local weights and measures must be avoided or else carefully explained by the entry of the corresponding equivalents in lbs. and tolás, or in Imperial gallons and pints, or in bushels, as the case may be.

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## APPENDIX C.

## RESUME OF STANDING ORDERS ON CROP EXPERIMENTS.

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EXPERIMENTS ARE OF TWO KINDS:

(1.) *Ordinary.* (2.) *Special.*

Ordinary crop experiments are primarily directed to ascertain the average produce of the particular survey number or subordinate number in which the experiment is being carried out with the object of ascertaining the ratio which the assessment fixed by the Settlement Department bears to the gross produce.

The special experiment has for its scope an entire holding and (in addition to the objects of an ordinary experiment) its aim is to determine as far possible what are the profits of cultivation of such holding by a careful enquiry as to (1) the methods of tillage, (2) the cost of preparing the land, weeding and tending the crop, and reaping, threshing and winnowing it or otherwise preparing it for the market, and (3) the general circumstances of the cultivator and his standard of comfort. Opportunity is to be taken in special experiments to make exhaustive investigation into every circumstance affecting the holding from an agricultural point of view.

*Precautions.*

1. It is generally essential that no one should know beforehand what field or portion of a field is about to be subjected to experiment.
2. It is essential that every part of the operation should be conducted under the close supervision of a European officer or of a native officer of not lower rank than a Deputy Collector.
3. The most extreme care is to be taken to prevent any tampering with any portion of the crop between the moment when the field is selected for experiment and the final measurements and weighments.

INSTRUCTIONS.

*A.—Ordinary Experiments.*

1. In conducting an experiment it will be well for the sake of a reliabl average that small patches of most carefully ascertained area should be taken in different parts of the same field. Sufficiently accurate

results can be obtained from a quarter of an acre or even less, cut in different places of the same field. But no experiment in dry crop land is to be in all on less than six gunthás in one number, or in irrigated land on less than three gunthás in all. Areas should be ascertained with the ordinary measurer's chain of 16 links—one square chain being one guntha or $\frac{1}{40}$th of an acre.

2. The patches should be so selected that the aggregate may give the best possible idea of the average crop of the whole field. The apparent quality of the crop, in comparison with other crops in the same village or táluka should be stated.

3. Too numerous experiments or those conducted over an area too extensive for most minute supervision will not only be valueless but most misleading.

4. The form prescribed is appended to these instructions with sample entries and explanatory footnotes which are to be carefully followed. Columns 28 and 29 of that form may be left blank in ordinary experiments. They will be filled up in the office of the Director of Agriculture, but the information required must be supplied in an appended memorandum under the following heads:—

(1.) Cost of the manure noted in column 15.

(2.) Ploughings, number, with number of bullocks used.

(3.) Harrowings, number, with number of bullocks used.

(4.) Bullock hoeings, number, with number of bullocks used.

(5) Hand weeding, number of weeders employed, for how long and at what rate of wage.

(6.) Reaping. The cost usually varies with the quality of the crop. The customary share of produce given to the reapers should be given, or the number of men employed, rate of wage and time occupied.

(7.) Thrashing, winnowing, &c., similar details.

Care should be taken to note how far the above operations are performed by hired labour.

5. The share of the crop given to the village balutedárs (Mahárs, Carpenter, Blacksmith, &c., &c.) should be estimated as nearly as possible.

6. If there is anything abnormally good or bad in the returns of produce the cause should be investigated and stated.

7. Where it is the custom to give fallows of one, two or more years (as in the Konkan and near the Gháts) the ordinary rotation of fallows should be explained.

*B.—Special Experiments.*

A special experiment comprises one or more ordinary experiments. The details for the component parts of the special experiment should be entered in the prescribed form as for so many ordinary experiments, and the instructions under the head "Ordinary Experiments" are to be observed as far as they are applicable.

2. Officers are not expected to carry out many such experiments. One in the kharíf and another in the rabi reason will suffice.

3. The size of the holding to be selected for experiment will depend very much on the time which the officer is able to spare and on the average holding of the tract. It is not convenient to choose very small holdings, while for obvious reasons very large ones cannot satisfactorily be dealt with.

Perhaps the best holding which could be selected is one which occupies fully the time and labour of the holder and his family and is cultivated with one or two pairs of bullocks.

4. It will be easier and more satisfactory to experiment on the holding of a pure cultivator who devotes himself with his family entirely to its cultivation, and subsists on the profits thereof. If the uncertain element of daily wages is admitted into the experiment even as regards one member of the occupant's family, it leads to complications which prevent a clear insight being obtained into the means of subsistence which the cultivation of the holding affords.

These remarks do not apply to a holding cultivated entirely by means of hired labour by a superior holder. A few special experiments on such holdings would be valuable.

5. Officers are advised at first to carry out experiments on holdings cultivated wholly or for the most part with one or two of the chief crops of the district. After making several such experiments an officer will find it easier to experiment on holdings cultivated with a variety of crops assisted as he would be by the results *mutatis mutandis* of the simpler experiments.

6. As the enquiries to be made by an officer conducting a special experiment are necessarily somewhat inquisitorial in their nature, it is advisable in selecting a holding for experiment to make some private enquiry beforehand as to the character of the occupant. Many would object to be so closely catechised as to their domestic arrangements and circumstances. Much will therefore depend upon whether the occupant is likely to be communicative and whether his communications can be fairly trusted.

7. The minimum area prescribed for actual experiment in a specially selected holding is six gunthas in the case of both irrigated and dry crops. But the area subjected to experiment in purely dry-crop lands should be at least five per cent. the holding.

8. Where the holding comprises several survey numbers cultivated with the same crop or with different crops, happening to be ripe for cutting at the time of experiment, plots should if possible be selected in each field. This should be specially attended to if widely differing rates of assessment on the several fields disclose the fact that the soils have been classified as of varying quality and productiveness.

9. When the average produce of each field has been estimated as far as possible by the experiments made, it will frequently be found that the outturn of a raw crop, or other subordinate crop cannot be ascertained. Experimenters should endeavour to supply the deficiency in the best method available. There is a large number of careful experiments in the yearly reports which may be utilised (provided the results are intelligently applied) or later on in the season the experimenter may find it easy to take an ordinary experiment elsewhere on a crop similar to the unestimated crop. Such experiment should then be embodied with the other component parts of the special experiment. Foresight must be used to prevent, if possible, the choice of a holding containing a crop which cannot be directly or indirectly estimated, unless indeed its area is insignificant.

10. The next step (after filling in carefully the tabular statement as far as possible) is to calculate the gross produce of the holding.

From the gross outturn the expenditure of grain for all purposes should be first deducted, then the balance of produce should be converted into cash, and lastly the cash outlay deducted from that. The object is to see what is left to divide between Government and the cultivator, after the latter has paid all charges including the value of his labour and that of his family. The surplus is the full rent of which Government takes part only. The assessment should therefore be compared with the surplus and not in the first instance included in the cash outlay deducted as above directed.

11. Some of the most important deductions from the gross total (where the crop consists principally of food grains and fodder) are—

(1) The grain required for consumption according to the number of the family. This should generally be calculated at $1\frac{1}{2}$ lbs. per diem for adults and 1 lb. for children.

(2) The fodder for the plough cattle (milch cattle and the like are not necessary for cultivation: they may be considered as luxuries and their fodder should not be deducted in this place).

(3) The share of the crop which goes to pay labourers remunerated by food wages in whole or in part, the expenses of reaping, thrashing, winnowing and the like, and the customary dues to village servants useful to the community, and lastly the quantity which is required to be kept for seed, if the custom be to keep the seed and not purchase it at sowing time.

12. The objects of cash outlay which may be specified are—

(1.) Seed and fodder if purchased.

(2.) Charges for water other than those fixed by the Settlement Department.

(3.) Manure if purchased.

(4.) Hired labour if money wages are paid.

(5.) Purchase and replacement of live and dead stock (not repair of the latter, for that is provided for in the deduction on account of customary dues).

13. The cost of cultivation to be entered in column 28 must now be calculated from the money values of the deductions of para. 11 and the cash items of para. 12 (the Government assessment and special rates for water not being included). The result will show not the cost of cultivating each crop of the holding, but each acre. For the whole series of experiments included in the special experiment there will therefore be only one entry in column 28. Some crops cost more to cultivate than others, and it will be one of the connected subjects of observation to consider the comparative cost of cultivating various crops.

14. The surplus (para. 10) left after deduction of cultivation expenses goes to pay the Government assessment, expenditure on ceremonies, luxuries, purchase of extra comforts, and payment of debt. But not only these. No deduction for the cost of clothing, oil, condiments, and the like necessaries has yet been made. Attention to these very difficult points is asked.

15. The following connected subjects of observation are suggested to experimenters:—

(1.) The rent per acre at which land is sublet, the rent rates being compared with the assessment.

(2.) The transactions on land cultivated by a superior holder entirely by means of hired labour.

(3.) The average per head of an agricultural family which in different localities must be cultivated to cover expenses and maintain the family.

(4.) The customary rotations of crops in various localities and on different soils.

(5.) The amount of seed used in various places for different crops.

(6.) The yield per acre of different seasons, crops, localities and rotations.

(7.) The usage as to employing hired labour for weeding, reaping, &c.

(8.) The number of acres tilled by a pair of plough cattle.

(9.) Sales of standing crops (Khoti).

(10.) Indications of improvement in the methods of tillage by use of improved implements and the like and in the mode of preparing the produce for the market.

16. The enquiry should be exhaustive in its nature and no subject should be omitted which is likely to throw light on the condition of the cultivator and his profits from cultivation.

17. Carefully conducted special experiments will not only throw light on the various important subjects detailed above, but will give Revenue officers an insight into a variety of matters, intimately connected with their ordinary duties, such as it would be difficult otherwise to gain.

E. C. OZANNE,
Director of Agriculture, Bambay.

T. H. STEWART,
Survey and Settlement Commissioner.

| Number of Experiment. | Village. | Táluka. | Survey or Subordinate Survey Number. | Total area of such number or subordinate Number. | Full assessment of ditto (exclusive of Local Funds). | Means and extent of Irrigation, if any. | Rate per acre of special water-rate, if any. | Area selected for experiment and date of experiment. | Description of crop experimented on, with Botanical name and Local name to show variety. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | | | | A. g. | Rs. a. p. | | | Gunthás. | |
| | | | S. No. 9. Pot. No. 1. | 0 20 | | | | 10. 15th October. | Wheat (Triticum vulgare) "Bakshi." |
| | | | | | | 3 acres (Canal) 2 acres (Well.) | 5 Rs. | | Sugarcane (Saccharum officinarum) "Punda." |
| | | | | | 10 8 0 (Soil and water combined.) | 1 acre Pátasthal. | Included in Col. 6. | | |

| Number of Experiment. | Village. | Táluka. | Survey or Subordinate Survey Number. | Sown broadcast or drilled. If latter, with what kind of drill. Date of sowing. | Outturn of area | | |
|---|---|---|---|---|---|---|---|
| | | | | | Yield of grain or other principal product. | Equivalent of ditto in lbs. according to actual test. | Yield of chaff of other useful by-product. |
| 1 | 2 | 3 | 4 | 17 | 18 | 19 | 20 |
| | | | S. No. 9. Pot. No. 1. | Drilled with the Moghad on 29th September. | Local sers (measure). 100 (grain). | Lbs. tolás. | Lbs. 400 lbs. chaff. |
| | | | | Drilled with the pabhar in the Mrig Nakshatra. | 150 unhusked (=100 clean rice). | 250 0 | |
| | | | | | 1,400 canes topped and stripped for the mill yielded 100 lbs. of gur. | | 800 lbs. tops and leaves. |

| Usual rotation. | Character of season as affecting the crop of experiment and local estimate in annas. | Kind of soil with local name. | Character of cultivation good, indifferent or bad. | Kind, quantity and time of application of manure. | Amounts of lbs. of seed per acre. |
|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 |
| 1. Wheat.<br>2. Jowári.<br>3. Gram. | Early rains scant. October rain heavy. Favourable to this crop on the kind of land, 12 annas. | Black soil "Awal Kali." | Bad. Field very weedy. Large patches of hariali. | 20 cart-loads of khat per acre, spread after the first ploughing. | 32 lbs. wheat and ½ lb. kardai sown together. |
| Undefined—<br>1. Jowári.<br>2. Bájri.<br>3. { Gram. San. | | | | 150 sheep folded for 7 days.<br><br>San sown and ploughed in as a green manure. | 3 lbs. bájri.<br>3 lbs. tur.<br>1 lb. { mug. math. ambadi. |

| of Column 9. | | Average per Acre. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Value of amount of Column 18. | Value of amount of Column 20. | Yield of Column 19. | Yield of of Column 20. | Value of Columns 21 and 22. | Assessment fixed by Settlement Department. | Percentage incidence of Column 26 on Column 25. | Cost of Cultivation as per separate memo. | Percentage incidence of assessment on net produce. |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| Rs. a. p. | Rs. a. p. | Lbs. | Lbs. | Rs. a. p. | Rs. a. p. | | Rs. a. p. | |
| | | | | | | 5·06 | | |
| | | | | | | 10·29 | | |

EXPLANATIONS :—

Column 6.—In this column the Local Fund assessment is *not* to be entered. In special experiments Local Funds will be included in the general expenses of the holding in order that the incidence of Column 29 may be estimated. In cases where the Settlement Department has fixed a separate water-rate per acre on any land, the rate may be shown in Column 8 *and included* as part of the assessment of the land in calculating the ratio of the assessment to gross produce (Column 27.) But where, as in the case of patasthal cultivation there is a consolidated rate for soil and water combined, that rate is to be shown in Column 6, with the words "soil and water combined," below the figures.

Column 8.—If the actual area irrigated does not coincide with the area on which the rate is levied, explanation should be given. See also note on Column 26.

Column 9.—If a number or subordinate number is partly irrigated, it should be clearly shown whether the experiment deals with the irrigated or unirrigated portion, or with both.

Column 10.—If other crops are grown in rows or otherwise with the crop experimented on, *e. g.* kardai with wheat or jowári, or tur with bajri, this fact should be explained in a footnote, and by entering the amounts of seed of each crop in Column 16.

So if the crop of the experiment proceeds or follows another of the same year, except that in this case the amount of seed of the crop, not subjected to experiment, need not be shown in Column 16.

Column 11.—Example given. The figures 1, 2, 3 mean 1st, 2nd and 3rd year. If in any year two crops are taken off the same piece of land, the two should be bracketed thus 2 {(1) Rice. (2) Wheat.}. If the rotation cannot be ascertained, who word "undefined" should be entered and the cropping of the *area of experiment* for the three preceding years should be entered, after enquiry checked by the entries in Village Form No. III.

Column 15.—By time of application is meant whether before or after sowing, or whether as a top dressing.

Column 16.—If as in the case of rice, the seed is first sown in a seed bed and then planted out, a separate statement showing the area transplanted from the seed bed, together with its size and preparation, must be given.

Column 17.—If the date cannot be given the Nakshhatra will suffice.

Column 18.—When, as in the case of "gur," the local custom is to weigh, the weight and not the measure is to be given. Grain is to be measured well dried.

Column 20.—Only such by-products as are useful as to fodder need be shown.

Columns 21, 22.—The value at the date of the experiment is to be entered here in brackets, with the name of the market town at which the value was ascertained, which should also be the usual market of the produce. Below this value, the value at the time of the 1st or if it is already paid that at the time of the second instalment should be entered. It is on this latter entry that the calculations are to be made.

Column 26.—See note on column 6. Fluctuating canal rates, sometimes levied according to the season for which water is taken, and sometimes according to the crop raised and calculated at rates liable to be modified from time to time, should not be considered as forming part of the standard assessment, but should be shown in Column 8, and included in Column 28 as one of the items of cost of cultivation.

Columns 27, 29.—The incidence should be shown to two places of decimals and not in rupees, annas and pies.

## APPENDIX D.

*(Extract from the Commissioner Central Division's Memorandum No. R.—5093, dated 17th October 1883.)*

2. The subject of the improvement of cotton is one which Mr. Robertson takes a special interest in, and regarding which he can, from having been Collector of Dhárwár and taken a special interest in the saw-gins there established speak with some knowledge and interest.

3. In some degree Mr. Ommanney is correct, that is, in saying that the improvement of the cotton must be a point forced on by the buyers and merchants themselves.

4. If they insist on good cotton, unmixed and clean, they will secure it. But as long as they will buy anything which comes to market, whether clean, pure or mixed, so long not only will cotton not improve, but it will deteriorate. When in Khándesh a year or two ago the Commissioner was surprised at the admixture he saw being carried on at one of the pressing establishments. He was told in reply that an order had been received to buy to enclosed sample. The sample was a mixed quantity of stuff, and to secure according to sample so many bales of one kind and so many of another were taken and knowingly mixed to meet the demand.

7. To such an extent are the merchants ready to buy anything that comes to them in the shape of cotton that last year very considerable quantities of inferior Khándesh cotton were sent to Broach, there packed and sent to Bombay as Broach cotton.

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*(Extract from the Director of Agriculture's No. 122, dated 22nd February 1884.)*

The Farm only grows Dhárwári and a little Hinganghâti. These varieties were far more severely injured by the excessive and untimely rain than the Warádi, a further proof of the undoubted fact that this last-named short-stapled cotton is more suitable to the district than the improved varieties, to introduce which so much labour and money have been expended. It does not appear to me out-of-place here to make a few remarks on the increase of the Warádi variety. In spite of all that has been done the stamping out of the Warádi cotton appears further off than ever. I do not think that I am wrong in saying that hardly one field of pure Dhárwári is grown in the Páchora Táluka. Encouragement is given to the growth of the Warádi in every way—

(1) the price is good,
(2) the climate is suitable,
(3) the people prefer it and are allowed to grow it,

not that I think it would be wise to interdict its growth. This plan has not succeeded.

Under present conditions in Khándesh admixture is likely to become almost universal.

I would refer to Mr. Robertson's review dated 28th July 1879 on the Farm Report of 1878-79. Admixture begins with the sowing. The Khándesh rayats do not keep a portion of their crop for seed, as is customary in the Deccan, but depend for seed on the Bania. The Bania receives all kinds of cotton. That purchased from the pickers who receive their wages in kind must often be mixed. He sells this and what he has received direct from the cultivators to the large dealer who has it ginned and pressed. The admixture so far may be done in ignorance, but on Mr. Robertson's authority I say that wilful admixture takes place at the hands of the large dealers and of the agents of the large ginning and pressing factories. At no single stage of this complicated business would honest and wise conduct succeed in preventing the evil. If the rayats sow pure seed, and keep their seed pure, the Banias will mix it. If the Banias were to guarantee good seed and to sell only such they would have to charge a higher price for it and the rayats would probably prefer using cheaper stuff which they would manage to find. If the large firms were to reject mixed cotton, their factories will be idle. Combined action is essential but as unlikely as it is essential.

2. It is easy to state these facts, but not so easy to suggest a remedy. The subject is referred to by the Commissioner of Customs in paragraph 30 of his last report, where he has quoted the warning which has been given by the Committee of the Bombay Cotton Trade Association. There is one sentence in this paragraph which the facts of the present season will not, I fear, permit to be repeated:—"The increase in Khándesh of cotton cultivation was accompanied by a small decrease in the acreage and outturn of the indigenous variety, showing that the last named variety was displaced in parts of the district by the exotic cotton." I obtained the figures of the Pachora Táluka where a large portion of the Khándesh cotton is grown:—

| | Warádi. | Hinganghâti. | Dhárwádi. |
|---|---|---|---|
| 1882-83 ... ... ... | 561 | 432 | 114,797 |
| 1883-84 ... ... ... | 19,886 | 4,653 | 91,008 |

But even these figures do not show the fulness of the evil. What is entered as Dhárwádi is not pure. I was told that the people who do not yet readily admit having sown the lately prohibited Warádi call their crop Dhárwrái if they can show even half of it to be such.

3. The Farm may do a little to remedy the evil by growing as much pure Dhárwádi as possible. This should be done, but there will be no guarantee that it will be sown pure if purchased for seed. There is no more common custom among the rayats than to sow a mixture of crops with the chief desire of securing some return, *e.g.* they sow jowári with a mixture of pulses. They do this in the hope that if the jowári fails, they will have the pulses to fall back on. Frequently such admixture is defensible on scientific grounds. But the same idea will tend to cause an admixture of different varieties of cotton. I cannot suggest a remedy though my best endeavours will be directed to the subject. This much can be done and it may bear good fruit. The warning of the Cotton Trade Association should be stated in clear terms and made widely known by notifications printed and posted in each village. This notification should also acknowledge the fact that the Warádi variety does seem to suit the district better and give a fair outturn when the season has not been favourable to the Dhárwádi. It should also assure the people that it is wiser to sow each variety separately, warning those who prefer the Warádi that their punishment will come sooner or later.

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(*Extract from the Director of Agriculture's No. 764, dated 14th August 1884.*)

I referred in detail to the condition of cotton in Khándesh in my remarks on the progress report and I trust that my recommendation (in the proposals for reorganization) that Mr. Stormont's sphere of work should be extended beyond the limits of the Farm, will meet with approval.

One of the most real difficulties is that expressed by Dr. Royle as far back as 1840, *viz.* the want of encouragement from merchants to bestow extra labour and expense on improving a produce which the planters find the buyers only purchase at the ordinary prices of that which though inferior is at the same time produced at an expense and I may add with greater certainty.

Dr. Royle pointed out one result of experiment which I believe is by all recognized as correct, *viz.* that the black soil is not so well suited for American cotton as the poorer soils. I cannot but think that attempts to introduce the improved varieties without regard to this fact were so far misguided.

I would here with some hesitation record the statement of a Pátil regarding the attempt in 1865 to 1867 to oust the indigenous variety by the wholesale importation of Hinganghâti seed from Berar. The steps taken are described in the Gazetteer, page 160. My informant says that a contract was given for the supply of the seed. The contractor went to Hoshangabad and made this object

known. The large demand caused a keen competition. The local supply was deficient. Carts came from all directions, many it is said from Khándesh itself. This was all taken to Khándesh and sown as Hinghangháti. The people called it Warádi. It was all they were allowed to sow till the later idea of introducing acclimatized New Orleans came in for its turn. Whether this story is quite correct or not, it accounts for the name Warádi. The Collector even hails the resuscitation of the Cotton Frauds Act.

## APPENDIX E.

*Statement showing the Quantity of Indian Wheat exported from the Ports of the Bombay Presidency to all Ports beyond the Presidency during the calendar years 1880 to 1884.*

| Months. | Years. | | | | |
|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. |
| | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... ... | 2,927 | 21,768 | 85,674 | 31,019 | 15,285 |
| February ... ... | 1,626 | 19,275 | 40,239 | 25,403 | 15,933 |
| March ... ... | 3,407 | 20,000 | 30,557 | 29,516 | 14,997 |
| April ... ... ... | 4,985 | 32,481 | 30,390 | 37,503 | 15,230 |
| May ... ... ... | 17,110 | 42,428 | 67,886 | 76,205 | 44,831 |
| June ... ... ... | 19,407 | 52,236 | 37,190 | 82,881 | 54,894 |
| July ... ... ... | 15,055 | 47,369 | 19,386 | 55,921 | 65,437 |
| August ... ... | 7,832 | 28,172 | 5,396 | 32,425 | 45,546 |
| September ... ... | 4,193 | 35,132 | 13,797 | 36,265 | ... |
| October ... ... | 6,527 | 48,835 | 22,317 | 18,466 | ... |
| November ... ... | 8,652 | 76,714 | 34,159 | 29,319 | ... |
| December ... ... | 22,991 | 48,559 | 32,703 | 34,508 | ... |
| Total ... | 114,712 | 472,969 | 419,694 | 489,431 | 272,153 |

E. H. AITKEN,
Chief Account Officer of Customs, &c.,
In charge Reporter General's Office.

*Bombay, 14th October 1884.*

*Agriculture: Annual Report of the Director of Agriculture, Bombay Presidency, for the year* 1883-84.

No. 9508.

REVENUE DEPARTMENT.

Bombay Castle, 2nd December 1884.

Letter from the Director of Agriculture, No. 1012, dated 16th October 1884—Submitting the first Annual Report of the Agricultural Department of the Bombay Presidency.

RESOLUTION.—This, the first annual report of the Director of Agriculture, contains a record of the measures taken by the Government of Bombay for the establishment of an Agricultural Department. The subject is not without difficulty, and His Excellency in Council has been sensible that the first steps in the organization of such a department call for much care and discrimination if its operations are to result in practical benefit to agriculture. The principal objects in view are to place under skilled, central and systematic direction the experiments which have been hitherto desultory, fragmentary and unscientific, and which have therefore frequently failed; to maintain a continuous record of experiments and observations; to aid and encourage higher cultivation, so that the producer may fully avail himself of the rapidly increasing facilities for export trade; to bring the producer into communication with the exporter of produce; and at the same time to acquire that command of agricultural facts and statistics which is necessary alike to the Government and to the agents of commerce. His Excellency in Council has the satisfaction of believing that this report proves that this important work has been successfully commenced. Mr. Ozanne has entered on his duties with much activity and intelligence; and if future annual reports may be expected to be fuller of results, and to exhibit an increasing grasp of the matters included in the scope of his operations, the proceedings described show that much work is already taken in hand, that mistakes previously made are in course of correction, and that Mr. Ozanne has correctly apprehended the functions he is intended to fulfil.

2. In the arrangement of his report Mr. Ozanne has observed the headings specified by the Government of India in the circular letter embodied in Government Resolution No. 4333, dated 29th May 1884. Under the first head, relating to the organization and maintenance of village records, he reports the introduction into the Dhárwár District of a new staff of Revenue Inspectors, who are intended to supervise the village accounts, a duty hitherto inefficiently performed by the general-duty kárkuns, to carry out the duties hitherto entrusted to the subordinate members of the Survey establishment, and to collect agricultural statistics. If the new system is found to work well in Dhárwár, it is proposed to extend it gradually to other districts, and the supervision of the new establishments will be one of the most important duties of the Director. The total cost of the requisite establishments throughout the Presidency is estimated at 2½ lákhs per annum, but the new establishments will supply the place of the present Survey establishments. In Dhárwár the survey records have already been handed over to the Agricultural Department. A reduction of one general duty kárkun in each táluka has also been effected.

3. In Appendix A. to his report the Director has given a sketch drawn up by Mr. James Campbell, C.S., of the heads of information which should be

noticed in preparing an analytical study of each district with a view to ascertain its needs for protection from famine. His Excellency in Council observes that the description of a district should include several maps or charts showing the quality of the soils of various tracts contained in it, the distribution of crops, the means of irrigation and facilities for extending it, the communications and routes by which produce is transported, and the markets in use.

4. While at Igatpuri the Director made some investigations on the use of ráb, and wrote a useful note on the subject. Mr. Ozanne considers that the opinion held by the natives that the chief use of ráb is to roast the soil rather than to act as manure is substantially correct, the object of the roasting being apparently to destroy the germs of vegetation which would choke the young plants. Material producing great heat would therefore appear to be indispensable, and there would seem to be no available substitute for brushwood. The experiments conducted by district officers under the orders of Government appear to have been performed unsystematically and to have yielded no important results.

5. Under the head of Agricultural Experiments including Farms, the Director has made some general remarks on the Farms at Hyderabad in Sind and at Bhadgaon in Khándesh. The results of the working of these Farms have been already laid before Government in the annual reports submitted in June and in the progress reports submitted in January. The experiments made by Mr. Woodrow at the Botanical Gardens, Ganesh Khind, have also been noticed by the Director. The attention of the Superintendents should be invited to the remarks now made by Mr. Ozanne, especially with regard to the conduct of agricultural experiments, rules for which are given in Appendix B. The Director has reviewed the steps taken to promote the cultivation of American cotton in Dhárwár and Kaládgi, of potatoes in Khándesh, and of other exotic products at the experimental farms and elsewhere. Separate reports on most of the experiments have already been submitted to Government. Some important correspondence on the improvement of cotton in Khándesh has been given in Appendix D. A further experiment on the curing of tobacco in Kaira is in contemplation, and Government have, since the report was written, consented to bear a large share of the cost for another year. The Director does not hold out great hope of the improvement of the quality of wheat grown for export, but he proposes to take a series of systematic tests with a view to determining the influence of climate and soil on the different varieties.

6. The resumé of standing orders on the conduct of crop experiments will be useful to district officers.

7. The Director has given special attention during the year to the subject of ensilage. Important experiments were conducted at Kirkee, with the valuable assistance of Lieut.-Colonel, Caldecott, R. A. The results are considered to be on the whole satisfactory, and it is hoped that the experiments will lead to the general use of ensilage by the Commissariat Department and by contractors. Further experiments will shortly be undertaken.

8. In future reports the Director proposes to include a sketch of the past season and the latest available information about the season ensuing. The Director has remarked on the incompleteness of his present report, but considering the short time during which he has been in charge of the Agricultural Department, His Excellency the Governor in Council is of opinion that the ground traversed by the report is sufficiently wide, and proves the great interest taken by Mr. Ozanne in all subjects connected with the department in his charge.

9. The report should be placed on the Editors' Table and copies should be sent to the principal English and Native newspapers.

W. P. SYMONDS,
Acting Under Secretary to Government.

To

The Director of Agriculture,
The Commissioner, N. D.,
The Commissioner, C. D.,
The Commissioner, S. D.,
The Commissioner in Sind,
All Collectors, including the Collectors, and Deputy Commissioners in Sind,
The Superintendent, Government Experimental Farm at Bhadgaon in Khándesh,
The Superintendent, Government Experimental Farm at Hyderabad in Sind,
The Superintendent, Botanical Gardens, Poona,
The Survey and Settlement Commissioner,
The Conservator of Forests, N. C.,
The Conservator of Forests, S. C.,
The Conservator of Forests, Sind Circle,
The Accountant General,
The Military Department of the Secretariat,
The Editors' Table,
The Editor, *Bombay Gazette*,
The Editor, *Times of India*,
The Editor, *Indian Spectator*,
The Editor, *Indu Prakásh*,
The Editor, *Native Opinion*,
The Editor, *Bombay Samáchár*,
The Editor, *Rást Goftár*,
The Editor, *Kásid-e-Mumbai*,
The Editor, *Dnyán Prakásh*,
The Editor, *Gujarát Mitra*,
The Editor, *Civil and Military Gazette, Sind Issue, Karáchi*,
The Editor, *Bombay Catholic Examiner*,
The Editor, *Marátha* and *Kesari*,
The Editor, *Surat Akhbár*.
} With copies of the report.

The Secretary of State for India,
The Government of India.
} By letter.

# ANNUAL REPORT

OF THE

# DIRECTOR OF AGRICULTURE.

## BOMBAY PRESIDENCY

FOR THE YEAR 1884-85.

Bombay:
PRINTED AT THE GOVERNMENT CENTRAL PRESS.

1885.

*Price—7 Annas.*]

BOMBAY BRANCH
OF THE
Royal Asiatic Society.
CLASS

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No. 1645 OF 1885.

From

E. C. OZANNE, ESQ.,
Director of Agriculture,
Bombay.

To

J. NUGENT, ESQ.,
Secretary to Government,
Revenue Department.

*Poona, 23rd October* 1885.

SIR,

I have the honor to submit the Second Annual Report of the Agricultural Department. The first Report circulated with Government Resolution No. 9508 dated 2nd December 1884, reviewed the working of the new department from its commencement till the middle of October 1884.

INTRODUCTORY.

Itinerary.

2. My movements during the year have been as follows:—

NOVEMBER.—Visited Ahmadnagar Cattle Show. Went to Sind to see the Haidarabad Farm.

DECEMBER.—Visited Bhadgaon Farm. The Poona Cattle Show detained me for the rest of the month at head-quarters.

JANUARY.—Spent the whole month with part of February travelling in parts of the Gadag, Hubli, Dhárwár, Bankápur and Karajgi tálukás of Dhárwár—supervising the work of the Circle Inspector establishment.

FEBRUARY.—Returned from Dhárwár on the 9th. Visited Bijápur on the 21st to make preliminary arrangements for the introduction of the Circle Inspector staff.

MARCH.—Visited the Nadiád Show in Gujarát. Halted at Surat to see the High School Farm. Visited Khadkála, Lonávla, Karjat and Igatpuri to supervise *ráb* experiments and make preliminary arrangements. On 11th March met the steam wheat-thresher introduced for experiment by the authority of Government Resolution No. 10057 dated 22nd December 1884, and spent 3 days at Niphád, in the Násik District, conducting the trials. Again met the machine at Puntámba, in the Ahmadnagar District, on the 18th March, having in the interval visited the experimental *ráb* plots at Igatpuri and Lonávla. From this time I made my head-quarters at Lonávla to be close to these plots.

APRIL.—On the 17th opened a silo at Poona; on the 25th paid a second visit to the Bhadgaon Farm, halting on the way at Igatpuri. On the return journey joined the camp of the First Assistant Collector at Borivli, in Thána, to see with him the site of a proposed reclamation of salt marsh since sanctioned (Government Resolution No. 7063 dated 31st August 1885).

MAY.—Spent 3 weeks in Dhárwár—supervising the instruction of the Circle Inspectors in measuring and other survey work. Visited Bijápur on the return journey.

JUNE.—Visited *ráb* plots at Lonávla and Karjat on 23rd, and at Lonávla again on the 29th. Thence I proceeded to Igatpuri on the 30th to see *ráb* plots, and to be present with the Survey Superintendent at the introduction of the revised rates into the táluka.

JULY.—I was present at the transplantation of the experimental rice plots at Karjat and Lonávla on the 10th. On the 11th I met the Committee of the Chamber of Commerce in Bombay. On the 22nd I saw the rice transplanted at Igatpuri. On the 28th I was again at Bijápur, when the final selection of Circle Inspectors was made.

AUGUST.—Incapacitated from travelling.

SEPTEMBER.—At head-quarters.

OCTOBER.—Visited Dhárwár to inspect the District Inspector's office and to arrange for the transfer of the Bijápur Records from Dhárwár.

3. My head-quarter office was moved from Bombay to Poona on the 15th March. The office is located in a hired house till such time as the Commissioners' office buildings sanctioned in Government Resolution No. 67 C. W.—132 dated 20th January 1885, are completed. Provision has been made for my location in these offices, which will be very convenient and will save much correspondence. An addition to my office establishment of a trained survey measurer and classer on Rs. 40 has been sanctioned from April. This man is designed to instruct the non-survey element of the Circle Inspectors as each district is opened. When not so engaged, his time is employed as a technical assistant in my office for the disposal of correspondence connected with survey work.

Establishment.

Government Resolution No. 3306 dated 23rd April 1885.

My head-quarter and travelling establishments have been amalgamated. Advantage has been taken of transfers and retirements to redistribute the clerks to suit the requirements of the work. I have now 14 clerks costing Rs. 662 per mensem as against 10 clerks whose pay aggregated Rs. 670 last year. These are exclusive of the Survey Instructor, and, of course, of my Assistant, Ráv Bahádur Bhimbhái Kirpárám.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

4. The Circle Inspector establishment, which was organized in Dhárwár last year, has been extended to the Bijápur District.

Advantage was taken of the reduction of a survey party, attached to the Southern Marátha Country Survey, to depute 15 measurers to Bijápur in February to form the nucleus of the establishment, but primarily to carry out village to village enquiry in three scarcity-affected tálukás. These men were employed till the commencement of the monsoon in village enquiry. They were then placed under the orders of the District Inspector of Bijápur (who, as in Dhárwár, was the Huzúr Surveyor) to prepare compensation statements for land taken up several years ago for four large roads, to measure up land subsequently required for murum pits, and for the stacking of metal, and to clear off the arrears of petty measurement work which had accumulated in the hands of the Huzúr Surveyor, though the latter had for some time been helped by an Assistant.

Government Resolution No. 955 dated 31st January 1885.

5. The staff required for Bijápur was found to be 40 men. From the 1st July five more subordinates of the Survey Department, including two classers, were secured. The Assistant Huzúr Surveyor was added. The remaining 19 were selected as follows:—

| | | |
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| 3. | From the passed students of the Agricultural Branch of the College of Science ... ... ... | 2 |
| 4. | From the passed students of the High Schools (agricultural classes) ... ... ... ... | 1 |
| | | 19 |

I have not, as in Dhárwár, permitted recruits from the Educational and other departments to join the staff—for reasons which the standing orders for recruitment printed as an appendix to this Report will explain. I have, however, not secured so many English-speaking men in Bijápur as in Dhárwár. The Bijápur District has no high school, and there are much fewer matriculated men in the revenue ranks. Moreover, there is a greater prospect in the regular line for non-graduates in Bijápur than in more advanced districts, and the best revenue subordinates were not tempted by the pay and prospects of the new branch.

6. To the post of Assistant District Inspector, I have appointed Mr. P. B. Limaye, the first of the successful students of the first year of the Agricultural Branch of the College of Science, who since leaving College has gained a good deal of practical experience in farming while in charge of the small farm

attached to the Ahmadnagar High School, where Mr. Limaye served as Agricultural Instructor for 3½ years with much zeal and credit.

7. The selected Circle Inspectors, who were not trained in the Survey Department, were placed under the Survey Instructor at the beginning of August. After one month of general instruction, they were directed to undertake the measurement of an unsurveyed alienated or *inám* village under the close and continuous supervision of the Instructor, assisted by two trained measurers. The Collector concurred with me in thinking that this would be of more practical utility than desultory instruction measurements.

8. The staff will be distributed throughout the District on the 1st November after having undergone an examination in the elementary principles of measurement and in the rules for the repair and erection of boundary marks. Those who fail to show that they have profited sufficiently by the instruction received will next year be required to undergo further instruction at their own cost, or may be required to revert to their former appointments.

9. I would not have it supposed that I consider a three-months' course sufficient to transform these men into trained measurers, but they will learn enough to be of very great use in their work, and to enable them by practice to perform all but intricate measurements, for which the large proportion of Inspectors trained in the Survey Department can be made responsible.

10. The selected Inspectors from the Survey Department are meanwhile commencing a thorough examination of the boundary marks of each village, at the same time bringing the village map up to date. I may here explain that this complete boundary-mark inspection has been accepted by Government as one of the most important initial duties of the new staff. The Survey Department after a re-measurement of the fields, which re-measurement is year by year becoming more partial in its extent, resigns the control of boundary marks, bequeathing the survey record which consists of—

1. The field marks.
2. The village and other maps.
3. The records prepared concurrently with the erection of marks and preparation of the maps.

Every year alterations in the field marks by negligence, by sub-division of numbers, by alluvion and diluvion, by new roads, railways and other public works, go on. Marks which were cancelled as redundant at the Revision Survey, and which should have been removed, have in numerous cases been allowed to remain. Some, indeed, have been erroneously repaired. A permanent establishment to prevent the destruction of the field marks is so necessary that without it an indefinite existence of the Survey Department with periodical revisions of measurements would be entailed. This maintenance of boundary marks cannot be entrusted to untrained men. No subject called for the remodelling of the old staff of general-duty Kárkúns of the Mámlatdár's establishment more than this. General-duty Kárkúns, however zealous and however free from other duties, had not the special knowledge requisite to keep the marks in proper order, but in fact they were so overwhelmed with miscellaneous work that it is not too much to say that the field marks have been left to look after themselves since the day that the survey parties left the districts.

The Land Revenue Code Rules provide for an annual inspection. The Village Forms require the same, but practically both have been dead letters. The first step, therefore, is to make a thorough inspection of all the marks of each village in its turn by men competent to do the work. In order that the work may be thoroughly done, the rules under the Code for the annual inspection are held in abeyance till the complete inspection, which may take 4 or 5 years, is accomplished.

Government Resolution No. 3515 dated 1st May 1885.

There will, however, be still the annual inspection by the village officers and a careful test inspection by the Circle Inspectors of each village, in order that the marks may not again fall into their present condition of gross disrepair.

11. In sanctioning the staff for Bijápur an important departure was made as regards the contemporaneous reduction in the General-duty or Bhág Kárkúns. In Dhárwár one of such Kárkúns was reduced in each táluka. In Bijápur the reduction was practically *nil*, and thus with the introduction of the new staff the Mámlatdárs have received an important and very necessary strengthening of their regular establishments.

12. Another important principle has been established, *viz.*, that the Circle Inspectors shall have nothing to do with the revenue fiscal work of the District, save in exceptional cases, and then only with the express sanction of the Director of Agriculture. Their whole strength will be expended on the statistical registers, inspection work, and miscellaneous survey work.

13. To turn now to the Dhárwár staff, which has completed one year's existence. I made a short tour in January and February, during which the work of nearly half the Inspectors came under my notice to a greater or less extent. My duty will normally be that of bringing to the notice of the Collectors, personally and through my subordinates, the shortcomings of the Inspectors. But I judged it in this case to be rather that of aid and advice, rather of ascertaining the difficulties which the Inspectors meet in their work, than of seeking to show where they had not reached a proper standard of efficiency. I sought, therefore, to ascertain points which called for decision in modification of, or in addition to, the principles originally laid down. At each stage of my tour these difficulties presented themselves, and were referred to the Collector, and where necessary to the Commissioner, with the desired result that most were satisfactorily removed.

14. I found that the Mámlatdárs had already begun to look on the new establishment rather as aliens than as an establishment for whose duties they themselves are responsible, and in which they themselves are most interested. I found a tendency on the part of the Mámlatdárs to utilize the services of the Circle Inspectors precisely in the manner in which Bhág Kárkúns were utilized. One or two instances may be quoted to bear out these assertions. In cases the Mámlatdárs had entrusted the sale of waste lands applied for for occupation to the Inspectors. In cases the Inspectors were ordered to give publicity to the objects and principles of local self-government, and even to prepare lists of eligible voters. Some were directed to examine the revenue and police files of village officers, some to prepare subscription lists towards the repair of village tanks,—I need not go on,—but will say that frequently these duties, which are in no degree part of the authorized work of the Inspectors, were exacted at the very time when the Inspectors should have been engaged in crop inspection, boundary-mark inspection and other of their set duties. The Collector invariably put his veto on the action of the Mámlatdárs, and in justice to them it must be remembered that the reduction of their General-duty Kárkúns had necessarily left them short-handed. Work had to be done, and the Inspectors were generally the most convenient agents.

Government Resolution No. 5036 dated 23rd June 1884, para. 3, and
Government Resolution No. 3306 dated 23rd April 1885, para. 12.

15. A very important duty of the Circle Inspectors is to improve the cultivation returns, and to this I paid most attention, especially as it was the work on which the Inspectors were engaged during my tour. On ten different days I spent 3 or 4 hours in the field with different Inspectors, checking the inspection returns of the village officers, and instructing the Inspectors how the work should be done. On the whole, I was surprised at the accuracy with which the registration by the village officers is done. I attribute this principally to the fact that they knew well enough that this year their work would be checked. On the other hand, I noticed an almost universal omission of unsown portions of fields. The extensive areas completely unproductive of any crop, owing to the spread of *hariáli*, *kunda* and other weeds, are thus reported to be cropped with the crop which may surround them. Again, the prevalance of crop mixtures and the absence of system in regard to the ingredients were remarkable, no less than the almost total absence of the recognition in the registers of the minor ingredients of row crops and crop mixtures. The omission of the second crops on

twice-cropped areas did not come particularly under notice. But I know this omission to be very general.

Mr. Fairlie Muir in a crop-experiment report from this district has brought this omission into prominence. I quote:—"There are 112 Government and 19 *inám* villages in the táluka. In 105 of the former there are, exclusive of the *inám* land in these villages, 22,787 acres of occupied rice land, while the amount of twice-cropped rice land is entered (in the village registers) as only 303 acres, and that in only 7 villages. This is manifestly incorrect. A considerable portion of the rice land is undoubtedly twice cropped. Twice-cropped rice land is also met with in almost every rice village. Further, the great majority of the Kulkarnis, whom I have questioned, admit that they do not enter the second crop. They plead ignorance." The deduction I wish to draw from these facts is that the work of the Circle Inspectors in improving the crop statistics is very important work. No check was ever exercised by Bhág Kárkúns, and the village figures, incorrect and unscrutinized, have perforce been accepted for all important deductions which are drawn therefrom for administrative and other purposes. The Inspectors are untrained in this respect, and accordingly I have with great care drawn up detailed rules for their guidance. These are not rules to which they can exact adherence from the village officers; but if in their supervision work they carry out the directions laid down, they will themselves become experts in the eye-estimation of crop areas, and the attention they pay to the work will be the measure of the attention which the village officers will pay. Moreover, from the careful estimates made in about 10 per cent. of the cultivated area by the Inspectors, fair deductions may be drawn regarding the balance.

16. Statistics of population and agricultural stock have received due attention. Two months of the year are devoted to this work. The demands of the administration reports of Assistant Collectors necessitate the yearly census in June and a return on the 1st July. No check has ever been attempted, nor, indeed, with the ante-Circle Inspector establishment, was any possible. I have fixed the time allotted to this work, so that the check may commence on the 1st July, and the revised figures compiled in the Mámlatdár's office early in September, so that in my annual report the results of the check may be incorporated.

17. I need not refer in detail to the other duties of the Circle Inspectors, but may enumerate them, including those referred to above—

*A.—Supervision of Village Records.*

(1) Boundary-mark inspection. (February, March, April.)

(2) Crop inspection to check the registration by village officers, and to ascertain the condition of each crop for the purpose of estimating produce and preparation of forecasts. (November, December, January.)

(3) Checking the figures of the annual census of population and stock. (July, August.)

(4) Checking the entries in the death and birth registers, the cholera, small-pox, vaccination, and other registers and returns required by the Sanitary Department.

(5) Checking the village registers of wells and other sources of water-supply.

(6) Inspection of Government waste land to check encroachments and unauthorised cultivation.

*B.—Survey Work.*

(7) Measuring land required for building sites.

(8) Measuring land taken up for roads, tanks and other public purposes and preparing the returns necessary for the due alteration of the records.

(9) Disposing of partitions of land under decree of Civil Court or on the duly sanctioned petition to the Revenue authorities.

(10) Measuring alterations caused by alluvion and diluvion, and preparing the necessary statements for correction of the records.

(11) Making such other miscellaneous measurements as may be required by the Revenue authorities in disposing of disputes and the like.

*C.—Agricultural Enquiry.*

(12) Noting carefully the cultivation of the staple crops, the varieties of crops and crop mixtures, the times of sowing and harvesting, the amount of seed sown, the implements of husbandry, manures, crop diseases, and the like.

(13) Watching prices, trade, wages.

(14) Supplying the Director of Agriculture with such information as may from time to time be required.

Eight months in the year are thus allotted to set duties. The rest will receive attention when most convenient or when necessity requires. In the intervals the complete boundary-mark inspection (para. 10) will be taken up.

18. In order that full advantage may be obtained of the knowledge and experience gained, the compilation of the táluka forms from the village returns will be made by each Inspector for his circle under the supervision of the Mámlatdár. The point gained is that the agency which checks the registers in the villages is also the compiling agency. In the work of improving statistics this point is important. The principle is extensible. The Huzúr Forms or the summaries for the Collectorate of the táluka returns—as far as they deal with the subjects entrusted to the Circle Inspectors—may be compiled by the District Inspector under the supervision of the Collector. The Provincial Returns are compiled in my office. This arrangement does not in any way diminish or interfere with the full authority and responsibility of the Revenue Department, but it at the same time secures a connection with statistics to my department from the first registration in the villages till the final compilation for the Secretary of State. I conceive that this is a guarantee for the correctness of statistics which will, as the agency becomes more expert at its work, secure reliance on the figures which it would be very rash now to claim.

19. At the beginning of the new organisation connected more or less intimately with the Agricultural Department it is fortunate that so much attention is being paid in high quarters to the improvement of statistics.

Government Resolution No. 4323 dated 29th May 1884.

Last year (Report, para. 8) I noticed the work of the Statistical Conference in Calcutta, and of the Committee on Huzúr Form 17 H. (crop statistics). Later on (Report, para. 9) a Provincial Committee composed of the Divisional Commissioners, the Survey and Settlement Commissioner, the Chief Engineer for Irrigation, the Collector of Poona and the Director of Agriculture considered the forms prepared by the Calcutta Conference.

Government Resolution No. 1887 dated 5th March 1885.

20. The modifications of these forms required to make them suitable to the Bombay Presidency were accepted by the Government of India. But the deliberations of the Committee further resulted in a strong recommendation to Government that the Manual of Revenue and Statistical Accounts and Registers—known as Hope's Forms—should be thoroughly revised and recast.

"We have in our minute study of the Forms prescribed in Hope's Manual come to the conclusion that these demand a complete revision. From time to time considerable alterations and additions have been made in the Village and Táluka Forms, and of late the decisions of the Committee on Huzúr Form No. 17 H. and now the requirements of the Secretary of State have necessitated alterations which, superadded to those previously ordered, call for thorough recasting of the Manual."

Government Resolution No. 9706 dated 9th December 1884.

Mr. W. P. Symonds, C. S., was placed on Special Duty, but he soon afterwards went on privilege leave, and on his return could not be again spared for special duty till the 14th August. The interval was not lost time. Opinions of District officers and of the heads of various departments were collected, and Mr. Symonds devoted much time to study. Since July last he has been assisted by a Committee composed of the Assistants to the Commissioners of Divisions with my Assistant as Secretary.

Inasmuch as I am most interested in the statistical portion of the work and as I was a member of the Calcutta Conference and also of the Committee which asked for the revision of the Manual, and as by the aid of the Circle Inspectors in Dhárwár I have been able to learn much of the practical deficiencies of the forms, I have associated myself with Mr. Symonds by preparing the

revised statistical forms in constant consultation with him, and have submitted them for the consideration of his Committee and for his editing. The revision is being made with great care, and will not only be productive of improved statistics, but will save much labour in the villages and the tálukás. The principle has been fully adopted, that nothing is demanded which is not within the known capabilities of the agency which is available. The revision of the Manual will be the completion of the work initiated by the Calcutta Conference and by the Bombay Government in appointing the Committee to remodel Huzúr Form No. 17 H.

21. To return now to the Dhárwár establishment. Experience has shown that the head-quarter District staff of the Agricultural Department was insufficient. To the staff described in clause 4, para. 7, of last year's report have been added—

Government Resolution No. 6403 dated 7th August 1885.

1. An assistant on Rs. 40—50, trained in the Survey Department, to be in charge of the head-quarter office, and responsible for the due custody and correction of all survey records.

2. A *daftarband*, Rs. 10.

A similar sanction has been accorded to Bijápur. The scale of pay of Assistant District Inspectors has been modified, travelling allowances according to the Code rules having been granted, "entirely apart from the fixed salary, as an additional inducement to them to move frequently about the District."

Government Resolution No. 3306 dated 23rd April 1885.

22. In connection with the transfer of the survey records of Bijápur the question arose, owing to the want of accommodation, whether it would not be better to form at Dhárwár, in imitation of the practice of the Survey Department, a strong head-quarter establishment for the custody and correction of the records for the four Kánarese Districts, instead of separating the records of each District and locating them at the head-quarter station of that District with a necessarily weaker head-quarter establishment. The proposal was negatived after reference to the Survey Commissioner, and a sanction of Rs. 2,000 accorded for providing accommodation at Bijápur. With the decision I am well satisfied, especially as it followed the ruling that "considering the serious responsibility attaching to any correction of the survey record, it must be insisted on that no such corrections should be made unless under the fullest guarantee that they are made by competent persons under competent supervision."

Government Resolution No. 4950 dated 17th June 1885.

Government Resolution No. 3306 dated 23rd April 1885.

The sanctioned staff is adequate, but as regards supervision the time has arrived when I have begun to look for further aid from the Survey Department. With 80 Inspectors at work scattered over two large districts, with the valuable records partly at Dhárwár and partly at Bijápur, in charge of men, who, though competent, have been accustomed to the closest supervision, with the daily increasing alterations and corrections the final sanction to which in each case is given under my own signature, with the certainty of an early extension of the new staff to new districts, the supervision which I can exercise is gradually diminishing. The Agricultural Department is designed to take over the districts finally classed by the Survey and Settlement Department, which is itself being brought to a close. I conceive that no supervising agency more fitted for the work than the Assistant Superintendents of Survey could be found, and these are the officers for whom provision will have soon to be made. Their training and experience are so valuable for the proper administration of the remodelled statistical staff being organized under the auspices of the Agricultural Department that I should fail in my duty were I not to press my claims for the gradual transfer of as many of these officers as necessity may require. It will not meet the necessities of the case if no transfer is made till the Survey Department is finally wound up. The plan which recommends itself to me is that the transfer should be gradual, that a commencement be made now by the transfer to the Agricultural Department of one Assistant Superintendent to be in charge of the two Districts already taken over. It would be the special duty of this officer (1) to supervise the work of the Circle Inspectors personally

and through the District Inspector and his Assistant, (2) to be responsible for the due correction and alteration of the survey record, (3) to inspect the district head-quarter offices, (4) to sign the *Ákárbands*,[1] (5) and generally to take over as my Assistant, as far as concerns his charge, the work which I have begun, and which now devolves entirely on me. That such a plan will to a certain extent delay the consummation of the Survey Department's work is clear unless the establishments can be kept at full strength by recruits from the Mysore and Sind Surveys; but, on the other hand, it will secure a just succession to the Revenue Survey. It will add to the cost of the scheme for the organisation and maintenance of the village records, but the additional cost is not incommensurate with the importance of the work. A representation to Government asking sanction to this plan is now being made.

The plan is quite consistent with the ruling of Government Resolution No. 5036 dated 23rd June 1884—"It will be impossible for the Director of Agriculture to carry on his extensive duties of agricultural experiment and observation or to lay the foundation of a permanent department competent to deal with questions of settlement, as contemplated in the Resolution of the Government of India, No. 340 G. of December 8th, 1881, unless he is permitted to form a local staff by degrees in the course of the years which remain before the completion of the field operations of the Revenue Survey."

23. The Instructor attached to my office (para. 3 above) was employed in May and part of June in instructing 19 Circle Inspectors of Dhárwár in elementary surveying and the rules for boundary marks. Almost all these men had before their appointment been attached for instruction for periods less than 3 months to a Survey Party, but experience had shown that their knowledge was very insufficient. I personally supervised the instruction and set the examination papers, translations of which are given in the Appendix. Eleven of the examinees succeeded in scoring half marks and over. Of these four passed a very creditable examination. Of the rest, seven reached a standard which satisfies me that they may be entrusted with the ordinary duties they have to perform, but one showed so little knowledge that he has been directed to join the class at Bijápur without pay. Besides these, two candidates were permitted to attend the Dhárwár class. Both failed and are now studying at Bijápur.

24. Connected with this subject the question arose for decision whether Circle Inspectors should be required to pass the Subordinate Revenue Departmental Examination. This examination is compulsory on men who join the Revenue Department as a condition to their confirmation. The examination demands a study of revenue subjects other than the special ones entrusted to the Circle Inspectors and, moreover, of Magisterial and Police Acts and Regulations, with which the Circle Inspectors are not concerned.

It is true that owing to the impossibility of securing at the outset men trained in all the three branches of the work devolving on the Inspectors, revenue, survey and agriculture, a considerable number of the posts are unavoidably filled by revenue subordinates, whose connection with the special branch will be only temporary. On these the Departmental Examination will be compulsory. But it will very seldom, if ever, happen that revenue subordinates, who have not already passed the examination, will be appointed Circle Inspectors.

Government Resolution No. 6958 dated 30th August 1884.

As to the rest, Government have acceded to my proposal that a special test should be demanded. The views of the Committee appointed to consider, *inter alia*, the question of the recruitment of the Circle Inspectors, laid down the principle that "the object of the Circle Inspectors and the corresponding higher grades of the Agricultural Department is to create a specialist branch, and in that branch, whether it be considered part of the Revenue Department for administrative purposes for a time and later on a part of the Agricultural Department, the men once appointed should remain till the end of their service." The duties of the Inspectors are connected with revenue, survey and agriculture. Each Inspector will in time combine the three characters, but that cannot be expected at once, and I am compelled to supply the

[1] The *A'kárband* is the final record of the Survey and Settlement Department showing the area, soil classification, and assessment of each field.

elements from distinct classes of men who possess one or more of the necessary qualifications, and to seek to superadd the others by training and experience. The survey element comes from the ranks of the diminishing survey establishments, which is so important that one-half of the Inspectors are to be drawn from this source as long as the supply lasts. The revenue element is secured by the offer of a rate of pay which will tempt the most intelligent and promising of the juniors of the regular revenue staff to volunteer. These at the same time are the most teachable. In order to make the beginnings of an introduction of the agricultural element I have looked to the College of Science and to the Agricultural classes of the High Schools.

The scheme printed in the Appendix will with this explanation be easily understood, and the remarks just made show that the departmental test required from revenue subordinates has only a very limited application. Government has, therefore, directed me "to submit proposals for the institution of a special departmental test applicable to officers of the Agricultural Department, when the scheme for the recruitment of the department now under consideration is settled." The examination of non-measurer Circle Inspectors made in Dhárwár in June and that to be made in November in Bijápur will form an essential feature in the scheme.

Government Resolution No. 3305 dated 23rd April 1885.

25. A few remarks as to the manner in which I propose to introduce the agricultural element must here be made. The only instruction available in agriculture is imparted at the classes attached to some of the High Schools and to the special branch of the College of Science. The Committee referred to in para. 24 above, proved clearly that by reason of the special privileges assured to graduates no feasible plan for opening out inducements to the students of agriculture at the College of Science can be devised, unless the University can be moved to establish a degree of agriculture. This proposal met with approval, and Government called for a scheme from the Director of Public Instruction and the Principal of the College of Science, but later on warned me that as regards the introduction of the agricultural element into the Circle Inspector ranks the solution of the question of a University degree in agriculture, which is certain to proceed very slowly and the decision on which cannot be foreseen, should not be waited for.

Government Resolution No. 1024 dated 3rd February 1885.

Government Resolution No. 3308 dated 23rd April 1885.

The matter has, however, made some progress. Dr. Cooke brought it before the Syndicate of the University. A Committee of Fellows has been nominated to consider and report their opinion. Of this Committee I am a member.

26. Irrespective of this question I have asked for sanction to select, year by year, from the ranks of the Circle Inspectors, men to proceed to the College of Science, to go through the agricultural course as Government nominees. This proposal has so far found support that Government have called for a detailed scheme.

Government Resolution No. 2192 dated 14th March 1885.

Lastly, the recruitment scheme shows that Government has given some encouragement to the Agricultural High School classes by the special provision of para. 7 of the Rules.

27. With the experience gained I have drawn up rules for the guidance of the Circle Inspectors. These have been discussed by the Collectors of Dhárwár and Bijápur, and I have been favoured with much assistance by the Survey Commissioner. At the suggestion of the Commissioner S. D., the Rules were considered in detail by a Sub-Committee of Assistant Commissioners with the intention of afterwards placing them before the Commissioners (including the Survey Commissioner). However, in order that the results of the revision of the Manual of Revenue Accounts might be fully before me, before issuing final Rules, it has been considered advisable to distribute the Rules provisionally with the approval and sanction of the Commissioner S. D. They will be put into permanent shape next year, and will be all the more complete by reason of the delay.

28. I have little power of showing by means of figures and statements the practical results of the work of the year in Dhárwár. The Inspectors are subordinates of the Mámlatdár and their work will be more properly reviewed by the Collector and his Assistants. I may, however, mention that all partition decrees of the Civil Courts were disposed of punctually, except in one case, and that though half the Inspectors were little trained in measurement work, the number of cases for disposal was reduced from 192 to 152, though no less than 175 new cases—an unusually large number—arose during the year. The arrears will now rapidly be cleared off.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

29. The Bombay Famine Relief Code has now been published. The connection which this Department had in its preparation was described in para. 4 of my Report for 1883-84. In Section 17 of the Code the Divisional Commissioners are enjoined in consultation with me to draw up as soon as possible "a statistical account with map for each district, showing the areas which are liable to famine, the causes which make them so liable, their accessibility or otherwise for relief purposes, the economic condition of the population of such areas, and a rough forecast of the maximum number of persons within each likely to require employment on relief works in a year of famine."

It has been decided that the Collectors shall supply information on the set points for compilation in my office, and submission for approval to the Commissioners.

Government Resolution No. 5542 dated 26th July 1883, para. 6.

*Vide* Appendix A to Report of 1883-84 and Government Resolution No. 9508 dated 2nd December 1884, para. 8.

30 This special statistical account will in no way interfere with the "Agricultural District History and Manual" which has been commenced under the orders of Government. This latter will have a larger scope. It will be prepared gradually as each district is furnished with the special statistical staff, which forms the subject of paras. 4 to 18 of this Report; whereas the former, called for by the Famine Code, will be worked up as soon as possible and contemporaneously for all districts. It will form a suitable section in the more complete Analytical Summary.

Fair progress in the analytical work has been made. The draft for the Dhárwár District is in print. All the information that can be collected from the existing sources has been collated and put into form. What remains to be done is to check the details recorded by the help of the Circle Inspector staff, to collect additional information where the available sources are found wanting, to improve the descriptions of the cultivation of the staple crops, to prepare the necessary maps, and generally to make the analysis a trustworthy guide such as will not only be a faithful record of present conditions, but will also direct and control the administration of famine. As far as Dhárwár is concerned, the analysis can be completed without difficulty; but when other districts are commenced it will be a severe tax on my establishment to prepare a similar careful and exhaustive record. Still this must be done, though the progress may be slow. As far as possible, unprotected districts will be taken up first.

The Madras Government in making provision for a similar analysis has deputed a specially trained officer, Mr. C. Benson, M. R. A. C., to the work. Mr. Benson is now occupied in enquiry in the Kurnul District in which he anticipates that the field work will occupy 6 months. I mention this fact, as it coincides with my view of the necessity of doing the work cautiously and without haste, and also to adduce a strong additional support to my claim for the aid of an Assistant Superintendent of Survey (para. 22 above). This officer would in his tours pay special attention to the facts required for the analysis. I regret that I cannot personally arrange to travel so as to give this finishing touch to the work. But for the next travelling season at any rate my movements will be subordinated to the work of the Forest Commission.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

31. With this subject the Agricultural Department has not yet been brought into connection.

## IV.—MEASURES OF PROTECTION, INCLUDING—

*(1). Fodder Reserves and Arboriculture.*
*(2). Extension of Communications.*
*(3). Irrigation.*

32. I will confine myself, under these heads, to whatever has special concern with the Agricultural Department, and shall not attempt to encroach on the ground covered by the Forest, Public Works, and Irrigation Departmental Reports.

### *(1). Arboriculture.*

Government Resolution No. 7001 dated 2nd September 1884.

33. Last year I noticed an anticipated encouragement to the extension of *bábhul* plantations through the appreciation at home of the merits of *bábhul* pods for tanning purposes. No real encouragement has been afforded. A consignment of pod shells was sent to the Secretary of State, but no reply has been received as regards the market value of the material. Eight bags of *bábhul* pods were exhibited at the Forestry Exhibition at Edinburgh by the Conservator of Forests, N.C., together with other tanning materials. Though the first place was accorded to the collection by the jurors, no special mention was made of the *bábhul* pods.

Government Resolution No. 6282 dated 5th August 1884.

Further, though Government has intimated readiness to grant any reasonable concessions to applicants desirous of forming *bábhul* plantations and though the District officers were requested to use every endeavour to induce landholders to utilize suitable land for the formation of village *bábhul* reserves, I have no progress to report. I look on this fact with much regret, but I am helpless. I can only hope that the matter will this year be taken up.

34. Last year I noticed under the head of arboriculture the *rób* experiments which were being arranged. This subject has occupied a great deal of my time and study, but the appointment of the Forest Commission has given it still greater prominence, and the experiments have proved more opportune than could have been anticipated. The experiments have been carried out in five distinct localities, and, generally speaking, as far as they have gone, corroborate the facts elicited by enquiry. The harvest has not yet been reaped.

### *(3). Irrigation.*

Government Resolution No. 150 C.W.—315 dated 4th March 1884.

35. In reply to a reference from the Government of India respecting the desirability of encouraging the extension of well-irrigation by reducing the cost of wells and lifts and building wells in places where there now are none, the opinions of the officers of the Public Works Department were solicited and compiled. Incidentally the assistance which may be anticipated from the use of boring apparatus was suggested for experiment. On the receipt of the papers the Government of India brought to notice the work done in the North-West Provinces by Mr. Wilson and Captain Clibborn. A suggestion then emanated from this department that

(1) The question of experimenting with Mr. Wilson's boring apparatus should be considered, and

(2) the example of the North-West Provinces should be followed by the deputation of a competent officer to enquire and report on the following points:—

(*a*) Whether assistance in the methods of sinking and building wells can be afforded by the application of engineering science.

(*b*) The feasibility of improving the native water-lifts.

(*c*) The utility of recording depths of water levels.

Government Resolution No. 730 C. W. No. 1624 dated 6th November 1884.

Mr. F. D. Campbell was accordingly placed for three months on special duty.

36. The results of his investigations may be summarized as follows :—

(1). *No machinery in the shape of boring tools or dredgers will be of any use, as a rule, to the rayat in enabling him to sink a well at less cost than by the ordinary method.*

REASONS :—In Gujarát the superficial strata, consisting of a sandy loam, of recent alluvial deposit, of great depth, (100 feet at least), present a nearly flat surface. The water level is regular. Trial shafts are seldom found necessary, but when they are sunk the cost is not more than Rs. 10 on the average.

In the Deccan and Southern Marátha Country the depth of soil is very small. Probably in 95 per cent. of the area it does not exceed 10 or 15 feet, and generally is far less. Below the soil lies the murum, which gradually merges into the hard, dense and non-porous basalt. Water is found in the murum, and it seldom pays to pierce the basalt. Its level is ever varying. Clearly, then, the boring apparatus found useful in the North-West Provinces has little chance in either the Gujarát or the Deccan districts. In the former it is not wanted. In the latter it would not be found suitable.

(2) *As regards the construction of wells, the rayats are conversant with, and do make use of, when necessary, a very cheap system of well-making which it is impossible to improve upon.*

For the detailed reasons which support this deduction I must refer to Mr. Campbell's report. It is only necessary to note that it is found that the rayats in the Deccan occasionally construct rectangular wells with straight walls, which must be more costly and unstable than wells of a circular pattern. As to this, Mr. Campbell says ; " I believe the rayat is generally aware of this (superiority of the circular pattern), but still many mistakes are made, with the result that the straight sides fall in after a few years. I, therefore, think that whenever opportunities occur for giving advice, they should always be told to adopt the circular pattern." In connection with this subject I would adduce the testimony of the Rev. J. Shilledy, residing at A'nand in the Kaira District. He says : " Government can do little in the way of helping the people to cheapen wells," and " People do not dig wells wider than they actually require."

(3) *The native water-lift or Mot is more efficient than any other water-lift which has yet been tried in the country, and which at the same time as regards cost and suitability for adoption can compete with the Mot.*

The best way of illustrating this opinion is to quote the conditions laid down by Mr. Campbell for enunciation to any innovator who wishes to introduce an improved lift. These are :—

(1) That the machine is not on a large scale.

(2) That it is suitable for irrigating about one acre per diem.

(3) That it can work at various depths up to 60 feet.

(4) That it is capable of raising at least 115,000 cubic feet of water one foot per rupee of cost, including all charges on capital, depreciation, and repair.

A machine that cannot fulfil these conditions cannot compete with the Mot.

The same gentleman whose opinion has just been quoted regarding the impossibility of teaching the native how to build his wells more cheaply, thinks, on the other hand, that it would be of the greatest benefit to the rayat if Government would introduce some cheap and more effectual method of lifting water than that in use. No doubt it would, but is it possible ?

My letter No. 555 dated 20th May 1885.

37. The deduction which I draw from the enquiry and report is as follows :—

" It appears quite clear that Mr. Campbell, a competent and experienced Engineer, on a full review of the evidence collected, is convinced that we cannot assist the rayat either by teaching him how to build cheaper wells, or by introducing improved water-lifts. If Government is satisfied that this deduction is established, it follows that the Agricultural Department should refrain from experimenting with any water-lift, unless such lift can enter into competition with the Mot on the conditions set forth in Mr. Campbell's 53rd paragraph."

38. Mr. Campbell has discussed the merits of various water-lifts which have been tried, and it will be well to record shortly his decision as regards each one.

(1). THE DOUBLE MOT.—Sometimes called the Madras Double Mot and in this Presidency Mr. Strip's Double Mot.

It is a modified form of working the leathern bags of the ordinary Mot. It consists simply of an arrangement for raising two bags alternately by means of a vertical revolving drum round which the ropes attached to the bags are wound. The bullocks work the drum by means of a long bar or lever fastened to it, and walk in a circular path till one of the bags is emptied of its contents. They are then made to reverse, and walk in the opposite direction till the other bag has been brought up and emptied.

Mr. Campbell admits that if the length of the lever is twice the diameter of the drum, all other conditions being similar, one bullock might draw up the same bag that two are usually able to do by the direct action. But it would take at least twice the time to do it, owing to the length of the path being doubled. In practice, however, an animal cannot on a small circular path exert the same force and to such good effect as it can do on the straight inclined one of the ordinary single Mot, which generally has a slope of about 1 in 5, and, again, although the animal is more continuously in work in the double machine, it works more vigorously in the ordinary one during the short period it is drawing, on the principle that animal power will always produce the highest mechanical effect when worked as it were intermittently,—that is, violently for a short period and *assisted by gravity*.

I have quoted at length, for I am not alone in thinking that the double Mot has much to recommend it, and I must adduce one or two other considerations.

Even admitting what is urged, there are, I think, conditions where the substitution of one bullock, thereby freeing another for other work, may be a gain.

One bucket balances the other, and so the net weight of water is all that has to be raised, and not the water *plus* the bucket. This being so, the bucket might be made heavier and of better material, say iron, without imposing additional work on the animal.

Again, the unnatural progress of the animal in the most usual variety of the ordinary Mot, backing up the inclined plane, is considered by some practical men detrimental to the bullock, and makes him unserviceable sooner.

(2). THE PERSIAN WHEEL.—"I have not yet found a Persian wheel," says Mr. Campbell, "which raised anything like the quantity it ought to do when worked by bullock power, and I do not consider it a sufficiently perfect machine to be placed in serious competition economically with a Mot." He refers especially to the oscillation of the different chains of buckets which is always going on, and which causes interference and fracture of the buckets.

(3). THE BURGESS BUCKET LIFT is rightly described, I think, as a perfected Persian wheel, and as the best and simplest of the water-lifts of European construction which have been recommended. But, on the other hand, though it is shown that its efficiency is greater than that of the Mot, its cost and repair counterbalance the gain. I believe in the Burgess Bucket lift, where the depth of the water is not greater than 20 feet. At a greater depth the oscillation of the buckets makes it practically unworkable without great risk by an ordinary native. Again it does not suit wells, the water-level of which sinks rapidly during the working hours of the day. The adjustment of the buckets is too great a tax on a paid labourer. Still the machine is well known, and if it is really an improvement, it will extend its use without Government encouragement.

(4). HARTFORD'S WINDMILL OR CALIFORNIAN PUMP.—A number of trials made have not given satisfactory results. To make it do the work of a pair of bullocks with a bag, a larger machine than those experimented with would have to be used, and this fact alone would oust it from competition with the Mot.

Other machines are referred to—*e.g.*, the CHAIN PUMP, STEAM MACHINES, &c., —but none of them fulfil all the conditions laid down, which indeed are all just and necessary.

I must quote Mr. Campbell's last paragraph—

"All the different varieties of water-lifts worthy of notice have now been described and compared, and it appears that for simplicity and economy in results none can surpass the ordinary leathern bag worked by bullocks, and this must be necessarily so in a country where animals as a motive power are so cheap and the machine used is so simple that it produces at least 90 per cent. of the power employed in working it. This is not the case in any other water-lift that has been brought forward as yet."

There are, however, at least two varieties of the ordinary Mot, and the question has to be considered whether the special features of the Mot of one district could not with profit be introduced into another. Here, again, Mr. Campbell decides in the negative.

In Gujarát there are the *Rámio* and the *Sundio* Mots. The bag in the former has no spout or trunk, and so it requires a special man to draw it on the trough and empty it. The latter has a spout, and is more self-acting. It empties itself by means of a separate chord fastened to the spout and attached to the yoke.

In both cases, where the amount of water required is very large, two pairs of bullocks are used working alternately; at the end of each trip the rope is disengaged from the yoke immediately the bag has been emptied, and is run back quickly by hand into the well, refilled and attached to the other pair, which is standing ready, the first pair in the meanwhile coming up leisurely to the starting point.

Where the wells have an average lift of 40 feet, it is almost invariably the custom to unhitch the rope and walk the bullocks up to the starting point; but when the lift is low, they are made to "back" up the slope.

In the Deccan the Mot is like the *Sundio* of Gujarát, though generally larger. Each bag is worked by two pairs of small bullocks yoked one pair front of the other, and often two bags are worked side by side together by one driver, who manages the 4 pairs of well-trained animals alone, thus economizing greatly in the number of men required as compared with the usual practice of Gujarát.

Such are the differences of practice, and I am satisfied that Mr. Campbell's decision is right. The varieties are modifications of one pattern, and each one possesses advantages which are suited to the circumstances under which they are worked, and which have been gradually developed to meet certain peculiarities which prevail naturally in the two different countries. The cattle of Gujarát are larger, stouter, better fed and brisker than those of the Deccan. These qualities are utilized to the best advantage in the *Rámio* pattern. The plan of unhitching the pair of animals at the end of the run would not answer, were two pairs worked tandem as is the custom in the Deccan, for the time lost in getting the two pairs into proper position before re-attaching the rope would neutralize the only advantage of that pattern.

39. (4). *A hydrographic survey to record the depths of water-levels on village maps would be of no help;* to the rayat of Gujarát, for he does not require it, or to the rayat of the Deccan, because the level is so variable and the surface of the country so uneven that the cost would be totally incommensurate with the results secured.

40. I offer no apology for the length of the extracts taken from Mr. Campbell's report. It is of the highest value, and an invaluable guide to me in the performance of the duties assigned to my Department, when no subject is more frequently urged on my notice than that which in its various phases has been dealt with by the report.

41. In connection with the subject of irrigation an important ruling has been vouchsafed by Government, which must find full record in this report.

A landowner of the Kaira District collected a fund of Rs. 40,000 in order to purchase steam machinery to raise water from a river and to make the necessary distribution channels to conduct the water to his land. As encouragement he asked for special exemption from the water rates leviable under Section 55 of the Land Revenue Code and a guarantee against enhancement of assessment based

on the consequent increased fertility of his land when a revision settlement takes place.

In this particular case it was found that the land was situated within the limits of a village held on the *udhad* tenure, and the applicant was necessarily left to make his own arrangements with the holder of the village. The general question, however, was brought before Government, whether in a similar case Government would be prepared to make special concessions of the character of those asked for in this case, with a view to encourage private enterprize.

The Collector argued that there was nothing wonderful or experimental in pumping up water by the aid of machinery, that it was simply a matter of capital and cost, for which a proportionate return was certain, that it was unlike a reclamation of waste or salt lands, where capital is spent with perhaps a very doubtful chance of success, that if the petitioner had found out some new invention by which water could be drawn up cheaply, and by rich and poor alike, he would have a just claim on a substantial concession as a fitting recognition of his enterprize; but that no such claim could be entertained in the present case, because the poorer cultivators could never imitate the steam pump.

The Commissioner contended that though the Collector had given, fairly enough, one view of the subject, there was another aspect—that the value of intelligent experiments could not be well over-estimated, that there was a large amount of capital in Gujarát ready to be put into any enterprize which could offer an assured financial success, but that there was probably no country where speculative improvements were so much distrusted, and where special need therefore existed for assistance in the development of new industries. In submitting the papers to Government, I urged that the financial success of the outlay of capital was by no means certain, and adduced in support of the principle the advice offered by the Famine Commission (Report, Part II., p. 145,) that, in order to encourage private enterprize, it should be formally laid down that the landowner shall be guaranteed against any enhancement of assessment for such period as shall secure to him such reasonable return on his investment as will encourage the prosecution of improvements.

Government Resolution No. 5428 dated 3rd July 1885.

Government ruled that the answer to the question raised must depend on the nature of the project for utilizing the water. "If there is abundance of water available, which would not be utilized otherwise and if the works required for utilizing it are costly and the difficulties to be overcome considerable, or the result uncertain, Government would be prepared to assist the projector by giving the water free for a term of years or at a low rate."

Steam machinery for irrigation has been successfully introduced on the Fuleli Canal near Haidarabad in Sind. Here the example was set by the Government Experimental Farm, where the enterprize was carried through the experimental stage.

Government Resolution No. 146 W. I.—349 of 31st July 1885, Public Works Department, Irrigation.

42. A precedent has been established with regard to the sub-division of survey numbers for convenience of dealing with applications for water under the canals administered by the Irrigation Department which has an important bearing on the future operations of the Agricultural Department and on the correctness of statistics of irrigation. Mr. Burke, Executive Engineer in charge of the Nira Canal, has introduced a system of dividing survey numbers into subordinate irrigation numbers, marked with stones, coloured red with *shendur* or red-lead to distinguish them from the survey marks. The system will save the annual measurements of the irrigated area, and will be a safeguard against fraud, and consequently against incorrect returns. The Survey Commissioner has accorded his approval to the plan, with the provisos that neither the cultivators nor the village officers shall be saddled with any responsibility with regard to the maintenance and repair of the special marks, and that the distinctive colouring shall be efficiently provided for.

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

43. Under this head I shall maintain the order of last year's Report.

A.—Experimental Farms.

44. The Progress Reports of the Bhadgaon and Haidarabad Farms were printed, but were not circulated according to the Distribution List of Agricultural Reports, &c., as the principle must be maintained that the thread of the narrative of the operations of the farms shall be carried unbroken through the Annual Reports. These were distributed before the end of July, or a month earlier than last year. The farms still remain under the Collectors of the Districts in which they are situated (see para. 17, last year's Report).

**The Bhadgaon Farm.**

45. I visited this farm twice. Mr. Stormont has been in charge throughout the year, assisted by Mr. Dádina, a graduate of the Madras Agricultural College. An extra clerk on Rs. 25 has been sanctioned, and to the post Mr. Desái, another graduate of the same college, has been appointed. The pay is nominal in his case, and his object is to gain practical knowledge of farming to fit himself for a higher post when available. An apprentice, Mr. Navroji, another graduate of the Madras College, has lately joined with the same object. All these, though taught at Madras, belong to the Bombay Presidency, and will with experience later on become valuable additions to the Revenue Agricultural Staff when it is extended to Gujarát, or will be available for the charge of agricultural experimental stations subordinate to the farms when the time arrives for the establishment of such. Mr. Dádina has profited by his experience, and his presence is a guarantee for the accuracy of experimental work, at the same time freeing Mr. Stormont for occasional tours. The latter made a tour in February through the cotton districts, and has found time for another tour since the date of his report. I am satisfied that a commencement has been made on the farm in properly conducted careful experiment. The report has been fully reviewed by me, and I shall notice only the most salient results in this paragraph with regard to those heads which are not discussed under separate sections.

Manures.

*Green manure.*—Green hemp (crotolaria) showed no effect in increasing the outturn of wheat,—a result which demands further attention. It is urged that this form of manuring was in fashion (in Europe), but has now few advocates. This is not to the point. In this country green manuring is practised, and it is very essential to test its value with a view, later on, to guide its use, and extend it, if found advisable. The Superintendent has been directed to ascertain the local usages of green manuring, and to institute experiments on the farm accordingly. In the face of the growing difficulty of providing manure in this country and of the absolute necessity of showing, slowly and after many failures though it be, how the use of manure may be made to increase production, the importance of green manures is not to be underrated, even though in Europe better results are obtained by the use of chemical and other manures. I notice that green soiling with hemp for wheat did not succeed on the Nágpur Farm this year (*vide* Nágpur Farm Report, para. 12). The reason appears to have been the poorness of the hemp crop, and perhaps this green manure is not suitable for wheat.

*Cowdung ashes.*—The Superintendent deduces from an experiment made with plots of gram manured respectively with cowdung and the ashes of an equal quantity of dung, that in burning cowdung the cultivator loses something, yet that by restoring the ashes to the soil he can secure very slightly inferior results. The principle, though quite correct, is overstated. The something which is lost is the nitrogenous constituents which are volatile, but they are all important, though, no doubt, more so with cereals than with pulses. Here the opportunity of teaching a most valuable lesson offers itself. The people do, as far as my enquiries have yet shown, neglect the use of ashes. The small superiority of the plot treated with fresh dung is partly due to the fact that ashes are in a more readily assimilable condition than fresh cowdung. The difference will be more accentuated when the results of the next year's crop on the same plot are reported.

Not only is it advisable to seek to teach the value of ashes, but the experiments must be directed to demonstrate the difference in the value of cowdung

according to the manner in which it is preserved, and to the condition of the animals which provide it. The truths I wish to see demonstrated clearly are that (1) it will pay the cultivator to take trouble with the proper preservation of the cowdung, and (2) it will pay him to choose for domestic purposes the droppings of ill-fed, old, and hard-worked animals, restoring the ashes to the soil. The well-preserved dung of milch cattle and other well-fed beasts is far too valuable as manure to allow him to expect anything like the return from the ashes that it is within his power to secure from the fresh or well-kept manure.

I believe that further enquiry will show that these principles are better known than I am now aware of; but the customs of providing no litter for housed cattle, and of leaving the droppings to ferment unchecked, at any rate are features which demand reform, if practicable.

In another plot the lasting effect of cowdung well preserved, as it is on the farm, is well exemplified. Jowári after a cowdung manured crop of sugarcane yielded 44 per cent. more than after gram, though the value of gram as a preparatory crop is well known. I venture to assert that no such result would have been seen if poudrette had been the manure for the sugarcane.

The same value of cowdung is still more vividly exhibited in a plot of til, following sugarcane, manured with dung, where the outturn was 100 per cent. better than in the plot after gram.

### Tillage as manure.

Closely allied to the direct uses of manure is the experiment on the cultivation of wheat known as the Lois Weedon cultivation. This is in its first stage, and its value cannot be judged from one year's experiment. The system is fully described, and as far as it has gone gives hope of valuable results. Though successful growth of unmanured wheat continuously has been proved impracticable in England, except under the Lois Weedon system, it is without it a marked feature of large wheat tracts of India, and even of parts of the Bombay Presidency. It will be my aim, later on, to attempt to ascertain whether a modified application of the principle of the substitution of tillage for manure, which is the underlying object of the system now under trial, cannot be successfully introduced into districts where wheat is grown now continuously, but with a small yield.

### Use of pickles to prevent smut (kanhi).

Sulphate of copper and common salt were used to pickle jowári seed before sowing. Jowári in this country shows a very great liability to serious injury from smut, which, however, apparently does not much injure wheat. The disease is preventible, but the use of pickles must be taught. It cannot be dictated. An attempt at dictation was made by publishing and freely circulating a paper I prepared on the subject. Though I was questioned by a few, I have no evidence that any one thought the advice worth following. The result was fairly satisfactory on the farm; but, as it happened, the season was unusually favourable to jowári, and even in unpickled plots it received slight damage. Attention will be directed to the value of the preventive when a bad smut year comes. One pickle, human urine, has advocates. It was not tried, but I think that other urine should be experimented with, for obvious reasons. Experiments with selected seed wheat of indigenous and foreign varieties, with Nankin cotton, on ensilage and on machinery will be noticed under separate heads.

Other miscellaneous experiments will be noticed briefly.

*Sorghum.*—Two varieties: (1) amber cane recently introduced from America, (2) Chinese sorghum long grown on the farm. The yield was good, but in the absence of proper appliances sugar was not made, and the juice refused to become jágri. I think that Cook's evaporator,—found successful both at Cawnpore and at Nágpur,—must now be tried; and the Superintendent has been requested to obtain the pan at least. It is worth the trial to ascertain whether these crops cannot be successfully and profitably grown for sugar production, the crushed cane being used as cattle food. It is a question whether the Superintendent

was right in allowing the crop to seed. On this point there is plenty of guidance available in the trials made in America.

*Maize.*—Four American varieties were tried again, and this time under very favourable conditions, but with no success. On the other hand, the good local variety as well as varieties grown in Sátára and Sholápur, which have an excellent repute, did well. Eight other varieties, from Australia chiefly, showed inferior results. This superiority of indigenous over imported varieties was also exemplified in the case of wheat, as will be noticed in its place.

*Golden Plantains* again did well. The variety is excellent, but there is no sale on the farm, and it does not pay to send the fruit to Bombay. Shoots are distributed gratis or at a low cost.

*Italian Turnips,* the seed of which was supplied by the Government of India,promise well, and it is presumed that care has been taken to keep seed for further trial and for distribution.

*Tobacco* of an acclimatized Shiráz variety produced a fine crop and paid well. Seed is available for distribution.

As regards arboriculture, the *divi divi* seed continues in demand. Tanning experiments with the pods are in progress. The tree has, no doubt, proved a success, and would pay private garden owners if grown near water-courses. Its success has also been assured in Dhárwár, and it is being largely planted in the Southern Forest Circle. *Arabian Date Palms* thrive well, but it has been decided, as soon as suckers are available, to test their value in Surat and other districts where the ordinary date plam flourishes. It is in uncongenial climate in Khándesh.

The *Carob tree* may be now abandoned as valueless, and so may the *Rain tree* (Pithecolobium saman).

The general operations on the farm with regard to staple crops were fairly successful, save and except in the case of cotton. The report shows that the season was very bad for cotton, and it forms no exception from the result of several seasons past. The difference between a bad and a good season is well exhibited—the latter showing a money return of 4½ times the former. The succession of bad cotton seasons in Khándesh—where cotton is the chief support of the people—is very melancholy.

### Live Stock—Cattle.

The object in view of weeding out crosses and confining attention to the pure Khilári Breed is being gradually, but surely, secured. New bulls are needed, but the opportunity of obtaining them has not yet offered. Three good bulls of other breeds were presented to the Ahmadnagar Local Fund Committee for use in that district

The Aden Herd has done well. The advice of the Commissioner was followed with a good result. It was that they should be kept in the byres and fed with cake and seed, with a limited allowance of grass. Full profit cannot be obtained on the farm, as there is no sale for the milk, and no satisfactory arrangement can be made, unless the cows can be sent to Poona. A proposal has been made to the Principal of the College of Science that the herd should be removed to the College Farm.

*Sheep.*—The cross breed between the dumba of Sind and the Khándesh sheep thrives, but there is great difficulty in disposing of the rams, and considerable loss occurs from the presence of too many rams addicted to inveterate fighting.

### The Haidarabad Farm, Sind.

46. I saw this farm for the first time in November last. The result of my visit was chiefly this—that the re-organization scheme sanctioned for the Bhadgaon Farm was found applicable in its principal aspect to the Sind Farm. The forms and registers sanctioned for Khándesh were adopted, and an Assistant Superintendent appointed to aid the Superintendent in the minute details of experi-

mental work and to free him for study in the neighbourhood of the farm the local methods of cultivation. As long as the Superintendent of an Experimental Farm is confined within its four corners, his work must to a great extent be work in the dark.

The farm has now been laid out anew to suit the requirements of experimental work. The re-division of the lands had, owing to the new roads, water-channels and buildings, become imperatively necessary. These permanent improvements are now all but completed, and continuous careful experimental work will proceed.

I cannot be too careful, however, to record that the conversion of the land long uncultivated, intersected with small water-courses, covered with brick kilns and the stumps and roots of old trees, with here and there mounds of drift sand and with an upper layer of soil matted with deep-rooted grasses into a level area suitable for the irrigation cultivation of Sind, has exposed much sour soil, which must sweeten before it is fit to produce good crops, and must become more even in quality by weathering before comparative experiment can be trustworthy. The unevenness of the plots for the present prevents deductions from some sorts of experiments—a notice of which will here be avoided.

### Selection of Seed.

Mr. Strachan, the Superintendent, has devoted much time and attention to the practical exemplification of the benefit of care in selecting seed, especially with respect to bájri, a staple of the district. His selection was begun 10 years ago on the old site of the farm. He picked out several apparently distinct varieties of bájri. These he grows year by year, but each year he collects from the selected separated varieties the best spikes, and from these grows a mixed selected crop. At first he thought that the separate varieties showed the best results, but now he is inclined to think that the mixed selected seed is the best. It matters little. There is selection in both cases, and the superiority of the farm bájri seed is very marked and has attracted attention, which is the first step towards imitation.

I advised the selection of the seed from the middle of the best formed and plumpest spikes. The Superintendent has adduced the results of trials in America with maize, where the decision was that the tip kernels yielded quite as good seed as the centre kernels. I have directed that comparative experiments be made to ascertain whether facts found true for maize will be borne out with respect to bájri. If this is proved, it will be important, for then the larger grains may be sold and the smaller kept for seed. I am aware that in selecting seed for wheat in some parts of England the farmer chooses the small grains, but I much doubt the wisdom of the plan. Certainly pedigree seed-growers would not approve it, and they are presumably educated in the matter by experience. Selection as regards cotton has been continued. Some results were reported last year, but the opinions of experts have not as yet been obtained with respect to the last season's crop, and, moreover, the selected seed plots being more advanced, received the larger hurt from an injurious frost. The plants from the selected seed do not ripen so early, but the pods are larger and more numerous, and the outturn is better. The quality is also superior.

### Manures.

Comparative experiments are as yet unsatisfactory. On tobacco last year poudrette and goat dung were tried. The experiment went to show that the latter has little superiority. This year cowdung was pitted against goat manure, the locally approved fertilizer for this crop, with the result of corroborating local empirical experience. It would be unwise, however, to lay much stress on these results.

### Tillage as manure.

The Lois Weedon wheat culture was commenced as at Bhadgaon. Here, as there, no deductions can be drawn from a single trial, especially as the condition of the land is so variable as to make the figures very doubtful. Mr. Strachan, however, is of opinion that the local peculiarities of cultivation, in which

perennial weeds give much trouble, may be greatly benefited by the system extended to other crops which, like wheat, repay good tillage. This remains to be seen.

Experiments on varieties of Crops.

*Juwár.*—A large number of varieties were tried last year. The Alakh sort did best. The season this year was very unfavourable, and no results were obtained.

*Tobacco.*—No less than 18 kinds were sown. In spite of unevenness in the quality of the land the Manilla variety gave the best crop. Mycrophylla, which secured the first place last year, was good again, but was found inferior to several new kinds.

*Buck Wheat* completely failed. *Mangolds* and *Carrots* give promise of success. *Lucerne* is well established, and financially was very profitable. The *Bourbon* cotton is attracting attention.

*Potatoes* were successfully grown last year, and, in order to preserve seed tubers for this season, the English method of pitting was tried, with the result that not one remained sound. The Superintendent has been advised to search and see whether local experience cannot suggest a more suitable method. Meanwhile fresh seed of the good Poona variety of potatoes has been sent to the farm.

I would notice prominently experiments of interest which are in the first stage—

(1.) A test experiment to show whether the alleged superiority for seed of the produce of 5 and 4-celled capsules of cotton over the 3-lobed capsules is real.

(2.) A similar experiment to show whether Mr. Strachan is right in his theory, that the shade of colour of the Nankin cotton can be regulated by the selection for seed from pods producing cotton of any desired shade.

(3.) An experiment on the continuous growth as compared with the rotation growth of tobacco. The former is the practice of the rayat, and is considered by him essential to secure a superior crop. The latter is more in accordance with ordinary scientific principles. The general crops of the farm (cotton, til (sesamum) and bájri) repaid cultivation—except jowári, which failed.

A new feature has been introduced by the receipt of bushel measures—both at this and the Khándesh Farm. The quality of many crops is well exhibited by the bushel weight, and this will be a point for invariable record.

**The College of Science Farm.**

47. Mr. Woodrow, who was last year in charge of the Botanical Gardens at Ganesh Khind, has been appointed Lecturer in Agriculture and Botany at the College of Science, chiefly with the object of improving the agricultural instruction of the Institution. The college has a farm of 70 acres, which is being brought into shape. About 12 acres have for some years been well cultivated, but the rest is new land. Some of the experiments on the farm deserve record.

*Crotolaria juncea* (tág) was used as a green manure for jowári with success. This green manure, as noticed above, did not give good results on wheat; and, as hinted (para. 45), the real reason may be that wheat delights in a firm bed—an admitted fact,—and does not thrive on the fresh furrow necessitated by the ploughing in of the green manure.

*Sugarcane.*—All experiments with this crop in the vicinity of Poona are of special value, seeing that it is the favourite one under canal irrigation. It would have been, I think, more satisfactory if Mr. Woodrow had gone into far greater detail on the subject, and I hope he will direct his experiments to demonstrate the shortcomings of the locally approved cultivation of this important crop.

He throws out a suggestion that thin planting may be more profitable. Experiment on thin and thick planting, with comparative figures, will not be lost on the intelligent sugarcane growers of the neighbourhood.

Further, he hints that the rotation in vogue is capable of improvement.

*Jowári.*—A large number (23) of kinds was sown. Most of these showed inferiority in comparison with local varieties. One sort from Bilichigan stood out ahead of the rest. No doubt further trials will be made. I must say that the jowári I see around Poona, grown chiefly for fodder, is very miserable, and Mr. Woodrow may be able to introduce better kinds.

The *Oat* crop, from seed procured from Natal, produced good results, 2,200 lbs of grain per acre, or about 54 bushels,—a yield in excess of the average in England. The yield of straw is not stated; but it was, I know, large. Gram as a second crop after bájri cut early for ensilage, gave 650 lbs. per acre,—a good yield for the locality, where gram is not a successful crop.

The Herbarium and College Botanical Gardens are interesting features of the Report.

Since the closure of the Botanical Gardens, Ganesh Khind, the distribution of mango grafts has been carried on at the College of Science Farm. The Soldiers' Gardens on its new footing will also as soon as possible take up this important work.

A long list of famous mango trees has been prepared from reports from every district. Mr. Woodrow at the College Farm and Mr. Stormont at Bhadgaon evince interest in this matter. The latter remarks that if even one-fourth of the common mango trees of the country could be replaced by grafts of good trees, an enormous gain to the country would be secured.

### The Nadiad Farm.

48. This is a private institution of some years' standing supported entirely by a local Committee of agriculturists. The experiments conducted, though of great practical utility to the observant members of the Association, are not reported with sufficient detail or accuracy for notice here. But I look on the work of the farm with great interest. It is a spontaneous outcome of the growing desire to improve local methods of farming. The Association has accepted the prescribed forms for the Government farms, and I anticipate valuable results later on. The farm is only 12 acres, but is in the centre of one of the finest districts of Gujarát.

## B.—General Principles of Agricultural Experiment.

49. The abortive attempt to establish a Central Farm at Dápuri, near Poona, was noticed last year (Report, para. 32). The project of a Central School of Agriculture is, therefore, deferred, and so must the project for a Central Farm; for I am convinced that till the recommendation of the Calcutta Conference is accepted, further extension of the principles for experiment cannot be profitably made. What is wanted is a Central Farm presided over by a competent agricultural chemist, who would guide the experiments both on the Central Farm and on the other farms in the Province. The Science College is quite suitable for all purposes of a Central School of Agriculture, and the farm with small extension is also suitable as the Central Farm. The chemist is the difficulty. The Calcutta Conference decided that each Province cannot afford to employ a first-rate agricultural chemist, and so approved of the alternative of asking the Government of India to provide such an officer as Consulting Agricultural Chemist to the Government of India. That appointment once made, it would not be difficult for each Province to supply itself within its means with an agricultural chemist competent to take charge of a Central Farm assisted by a Superintendent with local practical experience in farming, and to guide the experimental work of the other farms and experimental stations. The material is at hand. Natives from almost every Province have learnt theoretical agriculture at the Royal Agricultural College at Cirencester and the principles of English practice. These have also mastered the main principles of agricultural chemistry. This is the best material to work on; and such men, provided they have the sympathy and guidance of a highly trained agricultural chemist in India, will soon, with the co-operation of the Director of Agriculture of the Province,

Government Resolution No. 1024, dated 3rd February 1885.

bring agricultural experiment into fair competition with the work done in other countries.

50. There is a tendency in India, it appears to me, to suppose that any chemist must be to some extent able to teach agricultural chemistry, and that any analytical chemist must be competent to analyse soils and agricultural products, and to guide scientific agricultural experiment. No error could be more fatal. Agricultural chemistry is an independent science, demanding, it is true, a thorough knowledge of the principles of general chemistry, but also as thorough a knowledge of the principles of practical agriculture. The want of scientific direction by a specialist in the matter of experiment is evidenced by the various and often contradictory aims of the experimental farms of India. A perusal of the farm reports is sufficient to prove this. No doubt local conditions cause variations, but there is now little accord in the course pursued in different Provinces. The labours in one place do not aid those in another. There is no joint action. The object of the Calcutta Conference was to stimulate joint action and uniformity of aim. But the individual opinions of the Directors in different Provinces are causing the rapid obliteration of uniformity of principle and practice. Madras has even abandoned its Experimental Farm, and such may be the fate of the farms of other Presidencies, unless the Department of Agricultural Experiment is organized on a sound basis. The appointment of a Consulting Chemist under the Government of India would make it possible for the Supreme Government to review the progress of experimental work all over the country—to collate results—to suggest new fields of experiment—to prevent expenditure of time and money in the elucidation of main principles already thoroughly established, and requiring no further elucidation: and, to sum up, to enable the Agricultural Department of one Province to profit by the results gained in another.

51. At present the reports of the farms and agri-horticultural gardens are printed and spread broadcast over the country, and beyond it. The mass of literature on agricultural subjects is becoming too great. No one has the time to read half what is put before him, and often one reads a great deal with the feeling that it is profitless. This is not because the matter is valueless, but because it is undigested. Far better would it be if the Government of India could substitute for this general distribution of agricultural reports, pamphlets and the like, a short digest of the work done in the country every year. The digest, if prepared by such a man as the Consulting Agricultural Chemist to the Government of India should be, would be invaluable to each officer intrusted with the conduct of experiment, and would secure respect from the Agricultural Departments of other countries.

52. In writing this I do not forget that the Government of India has wisely and deliberately directed that agricultural enquiry should precede experiment; but experimental work is long and slow, and the beginnings must be made, indeed have been made, and enquiry not followed up by experiment will be feeble and lifeless.

### C.—Special Experiments.

53. The *Crop experiments* by Revenue officers have been carried out as usual, but this year for the first time under the revised rules printed in the Appendix of last year's Report. The review of the work done will be separately reported to Government.

54. *Ráb experiments* have been exclusively carried out by the Agricultural Department, though with the aid of the Mámlatdárs. Several officers of the Revenue and Forest Departments have shown interest in their conduct. The report will be made when the harvest is reaped.

55. *Corrymony Fence.*—The trial of this wire fence under orders from the Government of India was not carried out owing to the retrenchment Resolution. But arrangements have been made to have the trial conducted by the Principal of the College of Science, a suitable site for the experiment being afforded by the unenclosed portion of the College Farm.

## D.—Experiments on various Indigenous and Exotic Products.

### (a).—*Indigenous.*

56. **Wheat.**—The steps which led to the attempt to improve the staple by distributing handpicked selected seed were described last year. The distribution was general throughout all the principal wheat districts, but the time chosen was unsuitable. The handpicking was done in Bombay during the monsoon, and the wheat sent by rail and road to its destination. The result was disastrous. Nearly all the wheat reached the cultivators badly damaged by weevil. Much was quite unfit for sowing, and was sold. The soft varieties suffered more than the hard. Added to this, the wheat crop was almost a complete failure in the selected tracts of the Southern Marátha Country, and in the Deccan it suffered everywhere from rust. No benefit therefore accrued from the distribution in these two provinces. In Gujarát the season was excellent, and in spite of the weevils success was attained in Surat.

Distribution of selected seed.

Here the soft white variety, which is most in demand in the export market, though it was at first looked on with suspicion by the rayats, yielded so well in quantity and quality that a spontaneous demand for further supply of seed was made. The demand was, of course, readily complied with.

On the High School Farm at Surat the quality both of hard white and hard red was excellent, and secured for the produce first prizes at the Nadiád Show; but the outturn was considerably below that of the indigenous variety.

Careful experiments with unweevilled samples of the handpicked selected seed of all four varieties were made at the Bhadgaon and Sind Farms. As to quality and weight the results were good. At the Bhadgaon Farm each variety was grown both as an irrigated and as a dry crop. The weights per bushel were:—

| Varieties. | Selected. | | Indigenous. | |
|---|---|---|---|---|
| | Irrigated. | Dry-crop. | Irrigated. | Dry-crop. |
| | Lbs. | Lbs. | Lbs. | Lbs. |
| Hard red ... | 63 | 63¾ | 57 | 61 |
| Soft red ... | 64½ | 66¾ | ... | ... |
| Hard white ... | ... | 63⅜ | 61½ | 61 |
| Soft white ... | 64⅜ | 65⅞ | ... | ... |

It must be noticed that the indigenous varieties are hard white in irrigated and hard red in dry-crop land. Soft varieties are not grown; and though the selected kinds kept their colour, there is no doubt that the consistency of the soft wheats has even in one year considerably and markedly increased in hardness.

The acre yield was disappointing. I will not quote the figures, because only 47 lbs. of seed were sown per acre of the selected kinds as against 70 lbs. of the indigenous. Still the outturn of the latter was nearly double that of the former.

In Sind the selected kinds of hard wheat were so damaged by rust that the outturn was unrecognizable. The soft kinds suffered also more than the indigenous soft varieties. The yield was not reported, but the absence of rust among the indigenous wheats, and the powerlessness of resistance displayed by the selected ones, leave little hope of good result from further distribution. Moreover, the indigenous wheats in Sind, chiefly soft white and soft red, are excellent, and perhaps even superior to the selected kinds distributed.

57. Before these results came to my knowledge I had, with a view to avoid the chief cause of failure—weevil—in the former distribution, arranged that the seed

should be collected, handpicked and stored before the monsoon in the tracts chosen for a repetition of the experiment. In this plan I received the full support of the Chamber of Commerce, but before the time came circumstances developed themselves which deterred me from a second attempt at any general distribution. These were, first, the fine crop of Gujarát, which would naturally cause the people to be chary about putting down uncertain seed when their own was so good; and next my rising conviction that the plan of handpicking and distributing seed, so liable to change in character and quality and so difficult to preserve in a sound state, is bad. At the same time the great failure of the crop in the Kánarese Districts induced me to concentrate my efforts there, for not only would good seed be welcomed, but there was every probability that there would be a deficiency of seed, good or bad. I therefore purchased as much good seed in the Dhárwár District as the Collectors of Belgaum and Bijápur thought safe, and had it conveyed in bags mixed with dry ashes and stored at the several head-quarter stations of the selected tálukás, in order that at sowing time it might be sold to the cultivators sound and good.

My letter No. 998 dated 24th July 1885.

58. In my report I summed up the result of the experience gained as follows:—

"I think there is evidence that general distributions of seed wheat are unadvisable. The first year's yield at any rate is low; and if the rayats are to be told that they must wait to see results the second year, the distribution cannot be popular. There is no doubt that the great liability to weevil and the variable consistency of this grain at once go far to negative the utility of the plan. The cost of handpicking is very high, and of carriage quite incommensurate with the results likely to be obtained. The use of selected seed must be taught by the progress of the wheat export. The principle the people know well enough. The practice will arise as the people see the advantage. Meanwhile no opportunity should be lost of supplying seed, and at the same time good selected seed, whenever there is a likelihood of a scarcity such as there is in Bijápur and Belgaum this year."

59. I now intend to await the results of further experiments on the farms with the produce of the crop grown from the selected seed, but at the same time to be ready to supply good seed when a deficiency of seed is likely to assist its distribution.

Change in Colour and Consistency of Wheat.

60. Intimately related to the question of improving the wheat crop, by distribution of good samples of varieties in export demand, is the question how far the colour and consistency of the grain can be preserved. If these characteristics are proved to be incapable of preservation under altered conditions of climate, soil and rainfall, it stands to reason that the distribution of selected kinds, even if these can claim the name of pedigreed kinds, cannot be successful.

I wish therefore to bring into prominence the facts elicited bearing on this subject.

*1. As to consistency.*

(1). I plucked with my own hand an ear of wheat, which contained 35 soft and 9 hard grains. The variety was Bakshi (hard white).

(2). In the produce of the soft white wheats sown on the farms and personally by me in Poona, several hard grains can be detected. In my own experiment I most carefully examined the seed before sowing.

(3). So in the hard kinds, numerous softish and some soft grains are often apparent.

(4). Where soft wheat has been sown in districts of hard wheat, the produce even in one year is markedly harder than the seed sown.

(5). It is the universal belief of the people that the hard wheats become *pótha*, literally bellied, *i.e.*, softish, if rain falls when the crop is in ear. The Kánarese equivalent for the Maráthi word *potha* is *hotte*. This word also means bellied. The applicability of the term is evident when a sample is examined.

61. I am carefully preserving samples in air-tight bottles into which a small quantity of quicksilver has been introduced to preserve the grains from

weevil, so that year by year the alteration in consistency may be observed. I tried to keep samples by washing them with corrosive sublimate, but the poison completely changed the colour. The quicksilver preventive has been adopted from a custom prevalent in Gujarát to preserve seed wheat.

*2. As to colour.*

62. The change of colour is apparently not so rapid as that of consistency. In Khándesh, side by side on the farm, hard red in dry-crop and hard white wheat in irrigated land are produced without any marked change. Here the climate and soil are constant. The only difference is the variety of wheat and the irrigation in one case and not in the other. This year, when both varieties were grown with and without irrigation, the colour is unaltered. I have, however, a sample of the grains of one ear which have a decidedly red tinge. On the other hand, when hard red is made *potha* by unseasonable rain, the colour nearly approaches that of a white wheat.

Dr. Fairbank in the Ahmadnagar District found in a field of Bakshi (a hard white, long-arched, irrigated variety) specimens of club-shaped soft red. Soft red is not grown anywhere in the neighbourhood. The Pátil who grew the wheat is a careful cultivator and cannot account for the phenomenon. Here complete change in colour and consistency *and shape* occurred, unless perchance —which as I say is very improbable—a grain of soft red was sown.

63. As regards shape I have noticed some curious facts. It seems to me that when the soft white club-shaped wheat is grown where the long-arched hard white is indigenous, the grains which show a tendency to hardness also show a tendency to elongation. I shall watch the point but have no more to say now.

Trials with foreign wheats.

64. The next subject is whether it will improve the wheat of the country to import pedigree seed from abroad. Three varieties of excellent English wheat were presented by Messrs. Oakshott & Co. to the Secretary of State, and I was directed to give them a full trial. This I have done. I tried them on the Bhadgaon Farm both with and without irrigation. The result was total failure. The wheats pedigreed in England no doubt produce full crops there, but transported to India they yield nothing at all. The seed was put in in excellent condition. The season was favourable to wheat. I admit that it is probable that if seed had been secured, in a few years the English varieties might have been acclimatized, or educated to suit altered conditions, but such education would undo the work of years of careful cultivation in England. This one experiment justifies a polite refusal to any attempt to meet the desire of English seedsmen to extend their custom to India.

I have, however, received through the Bombay Chamber of Commerce from South Australia 4 very fine varieties of prize seed wheat, all soft white. They came too late for last year's sowing, but are now being put in at the two farms and in Poona. The seed has been successfully kept sound. I cannot anticipate results.

Government Resolution No. 4494 dated 14th June 1883.

On the Bhadgaon Farm an experiment was made with some Australian wheat (beardless wheat) which is used in its own country as a fodder crop. At the direction of Sir James Fergusson this wheat was grown in 24 acres of the best land available. Most was sown as dry-crop; for, if it requires irrigation, it cannot compete with local fodder crops. As soon as the rains were over it showed signs of distress. All was irrigated to save it except one acre. But little improvement was apparent. The dry acre seemed hopeless. There was a very unusual fall of rain in December. The crop quickly revived and grew strong and healthy. It was cut before ripening, and pressed into bales according to directions. The acre which had not been irrigated even recovered partially and gave a small quantity of straw. Two acres of the crop were allowed to ripen. The seed is being kept for further trial, but it is damaged by rust, and is of very poor quality even irrespective of this fact.

The pressed wheat hay has been made over to the Commissariat Department for trial as a food stuff. Its yield was no less than $1\frac{1}{4}$ tons per acre.

Apparently the trial was as successful as could have been expected, but all success is due to the abnormal rainfall of December, without which the crop would have perished.

The value of wheat straw as fodder is less than that of oats or barley. Oats can be grown very well in this country, and I anticipate little practical benefit from the Australian wheat hay.

65. The net result of the above considerations is that there is not any well-founded hope of improving the staple either by distribution of seed wheat, collected in favoured localities which produce a variety in export demand, or by importing pedigree seed from abroad. Yet it would be unwise to abandon attempts in this direction altogether, and my action in the matter cannot be considered as abandonment. I claim further time for experiment on the farms, and such experiment will be the only safe guide to further prosecution of the plan recommended by so high an authority as the Chamber of Commerce.

66. I have hinted at other methods of improvement, *e. g.*, some extension of the Lois Weedon principle, local selection of seed as is adopted already with such staples as jowári, and improvement of the cultivation of the crop which must be the outcome of full enquiry and appreciation of the existing methods, followed up by the cautious application, where found feasible, of scientific principles.

But meanwhile there are means at hand which are capable of extending the export demand of wheat. The chief of these is the improvement of the method of preparing the crop for the market, at the same time with precaution that such improvement shall not play into the hands of dishonest middlemen. Improvement in this direction must be protected against the tricks of the trade. Else no real advancement of the welfare of the country, nor of the just extension of the trade, can be permanent. The trade must be subservient to the interests of the people, and not the interests of the people to the trade.

Steam wheat-thresher.

67. I have consistently urged that the most effectual method of improving the export of wheat is to introduce steam machinery. My endeavours to induce a large firm to enter into the trial have been successful. A full description of the trials has been published in the 1st number of the *Indian Agricultural Gazette*. The results may here be briefly summed up.

The wheat is thoroughly cleaned, and bad and under-sized grains eliminated. The straw is delivered unbroken, but separated from the awns and husks. It was found that on the assumption that full work for the whole year can be found for the engine, and work for six months in threshing wheat and other crops for the thresher, wheat can be threshed, winnowed, dressed and bagged ready for export at a charge of 1 anna per maund of 80 lbs. This charge provides for European supervision and the use of coal as fuel. If two or three machines could work in one locality, and if the rayats could spare part (say $\frac{1}{2}$) of the straw for fuel, the charge could be lowered. This charge is further based on the supposition that the machine is worked for hire.

The minimum cost of threshing, or rather treading out, and winnowing by hand in the native method is 3 annas per maund, and nearly as much again is incurred at the port of shipment in dressing and re-bagging, which operations include much tampering with the produce.

The deficiency of the machine in the eye of the rayat is that the straw is not broken up, but perhaps requires partial re-treading to fit it as cattle fodder. Many other objections were raised. Most were very hollow, but it must be admitted that the machine did not find favour. Not one man willingly gave his wheat to be threshed, even though the price offered for the steam-cleaned wheat was very remunerative.

A straw-bruiser will remedy the defect if defect it is, but this will add to the cost; and it is a question whether the separation of the awns of the bearded wheats of the country, which contain no nutrition, does not leave the straw in a

more suitable condition for fodder than when broken up with the awns in the treading process.

68. The advantages of the machine have been fully discussed, and it only behoves me here to indicate what further action has been decided on.

Government Resolution No. 7803 dated 25th September 1885.

Government have withheld sanction to the purchase of a smaller engine and thresher with a straw-bruiser, but have offered to bear half the expense of another trial this season, with the promise that, if it is fairly successful, a smaller complete machine will be purchased for the Bhadgaon Farm.

The innovation is, no doubt, a great one, but not greater than the supersession of hand by steam machines in dealing with cotton. Success will be secured if only the legitimate value of the cleaned wheat can be obtained.

Collection of samples of the wheats of the Presidency.

69. Samples of each important variety of wheat from each district of the Presidency where the crop is grown, have been collected and are preserved in my office. The Chamber of Commerce nominated a representative Committee of gentlemen of the leading firms in Bombay most largely interested in the wheat trade to pass its verdict on each sample. The opinion of the Committee as to the value of the wheats of the various districts has been printed in full, and is a very valuable record.

Trade.

70. I append a statement showing the course of the trade during the last five years, and for the eight months of the present year. A comparison will show that the depression noticed last year was only temporary. As far as can be judged, the coming season will be very favourable for wheat all over the Presidency, and this with a deficiency of the American crop may go far to establish the Indian wheat trade on a firm basis. I believe that there are good grounds for hoping that when the Indian wheat is better known it will be better appreciated. A good season here coming at the same time as deficient crops elsewhere will go far to give Indian wheat the chance it wants.

71. **Tobacco.**—Encouraged by the favourable opinions received from the leading firms of Europe, Government sanctioned a grant of Rs. 2,500 for a further experiment in tobacco-curing at Nadiád in the Kaira District. The experiment was conducted by Mr. Bechardás Veháridás Desái in consultation with the Collector and in communication with me. The services of Mr. Jöns, who was employed last year as curer, were also secured. The whole credit of obtaining Mr. Jöns' assistance must be accorded to Mr. Bechardás. The curing shed of the previous year was unsatisfactory, and so the Collector's bungalow at Nadiád was converted into a drying room. Curing did not begin until the setting in of the monsoon, for want of sufficient moisture. The process took about three months. The final report on the subject has not yet been received; but the curing, in the Collector's opinion, was done in a much more systematic way than last year, and the tobacco looked light enough. Samples of cured leaf, in boxes of five pounds each, have been recently sent for further opinion to the leading firms of England and Ireland whose opinions were received last year, and also, by the kind offices of His Excellency the Governor, to well-established firms in Holland and to the Austro-Hungarian and Italian Consuls.

In order to test its actual worth in the European market, arrangement has been made to send to England five bales of the cured leaf, each of 250 pounds, to be sold there through a firm of brokers. The price thus fetched will be a more valuable guide than the mere opinion of experts in developing the Nadiád industry. The Desái purchased at his own cost a tobacco-cutting and cigarette-making machine from Bombay. With the help of this machine, smoking tobacco and cigarettes have been manufactured for sale in India. The question whether manufacturing can be profitably carried on is thus being tested. I am rather inclined to think that attention should be confined to improvement in the growth and curing for the foreign market. But Mr. Bechardás is not unwise to seek to ascertain how far local manufacture can be made to pay.

The tobacco cured this season is entirely of the indigenous Nadiád variety, but a considerable quantity of Virginian seed has been obtained and sown. Mr. Jöns did not arrive in time to apply his experience to an improved method of growth of the plant. Next year the value of his experience will be put to the test, and tobacco of both Nadiád and Virginian seed will be cured.

Besides the experiment made by the Desái for Government, this enterprizing gentleman has cured a large quantity of tobacco on his own account with Mr. Jöns' assistance. For the curing an extensive closed drying shed was constructed. It will thus be seen that Mr. Bechardás has in no way relaxed his efforts to secure success for the tobacco enterprize. Further, he has enlisted the co-operation of the Junágad Darbár in Káthiáwár. His elder brother Mr. Haridás Veháridás is Diván of the State. Under Mr. Jöns' superintendence a large area of tobacco has been sown at Junágad, and arrangements for curing the crop are in progress.

The attention paid to the improvement of tobacco on the Experimental Farms has already been noticed.

72. **Cryptostegia grandiflora.**—As noticed in the last year's Report, (para. 49), Mr. Woodrow instituted experiments with the knife and receiving tins procured from Ceylon on isolated trees to test the question whether the collection of the sap for preparation of India rubber would be likely to pay the Forest Department.

In September one old and vigorous plant, and 10 others between one and five years old, growing in soils varying from stony to rich river-side alluvion, were selected for experiment. Vertical cuts one foot in length were made with the caoutchouc collecting knife, which makes a V-shaped section in the bark and subjacent tissue. The collecting pan was fixed at the lower end of the cut. Fresh cuts were made 10 times at intervals of 3 days. The highest quantity of dry caoutchouc obtained from one plant was 10 grammes, and from one cut 4 grammes. Many of the cuts yielded so little sap that the collecting pan received nothing at all. The most vigorous plant appeared exhausted after the 5th cut.

Mr. Woodrow estimates that with the plants fairly plentiful a labourer could not make the cuts and fix the pans and collect the sap more than 200 times daily. This would yield roughly 100 grammes worth not more than 4 annas.

In Government Resolution No. 1023 dated 3rd February 1885 the reports of the Conservators of Forests were reviewed. In two districts the plantations were doing fairly well. In others the seed failed to germinate owing probably to mismanagement. Colonel McRae, the Conservator N. C., gave his opinion that the cost of collecting the sap would be too great to make a plantation commercially successful. This corroborates former conclusions, and now Mr. Woodrow's experiments seem to make it as certain that the collection of the sap from isolated trees, which are to be found in every garden in India and which grow wild on the Western Gháts, would scarcely pay even under favourable conditions.

*(b).—Exotic.*

73. **Cotton.**—The Dhárwár experiment, referred to in detail in my report last year, has presumably been carried out on the lines indicated. I have, however, failed to obtain any account of its success or otherwise. But during my tour in Dhárwár at the commencement of the year I paid particular attention to the various points connected with that experiment, and also to the other questions which bear on the improvement of cotton in Dhárwár.

*(1) Dhárwár Experiment.*

74. I propose first to narrate shortly the details of the experiment with selected seed instituted by the Commissioner S. D. with the advice of Dr. Forbes Watson. In 1882 some picked seed from 5-lobed bolls was sown in *one field* in each of the tálukás of Bankápur, Hubli and Gadag. The outturn in Hubli (Bengeri village) was very good; but Mr. De Silva, the Inspector of Cotton-gins who con-

ducted the experiment, states that in the produce the number of 5-lobed bolls was not greater than in the surrounding fields not sown with selected seed.

Another object of the experiment was to demonstrate the advisability of exchange of seed. The whole quantity of seed (332 lbs.) from Hubli was sent to the Bankápur táluka, and sown in the fertile well-farmed villages of Ingalgi and Budihal.

The crop at Gadag was poor, but 67 lbs. of seed were sent to the Hubli táluka and sown. The produce of the 5-lobed seed sown in the Bankápur táluka was very poor. The land was badly farmed and the seed was rejected for further sowing.

Besides the produce of the two fields above noticed, two tons of seed were collected, picked and distributed. In only one táluka were all the prizes awarded (last year's Report, para. 36). I ascertained by enquiry that the prizemen were rayats of Ingalgi and Budihal, and that these sowed the good seed raised at Bengeri in Hubli.

In 1884 seven tons of seed were collected from the fields sown with the distributed seed, that from one táluka being sent to another.

75. Looking at the whole matter I hardly think that results commensurate with the expense have been or can be secured. As long as the distribution was small in amount, it was possible to watch and record results; when it reached larger dimensions, the supervision and possibility of watching and recording results decreased proportionately, and with increase of distribution an equivalent decrease in care in selection must follow. If the first small experiment of 1883 had been conspicuously successful, it might be argued safe to extend the distribution on the same principle largely without attempting again to record results. But the first distribution was only very partially successful. It neither demonstrated the advantage of using the produce of 5-lobed bolls for seed, nor that of exchanging seed from one táluka to another; and certainly the numerous cotton-growers whom I saw and questioned, showed no anxiety to adopt the principles which it was sought to inculcate. It remains to be seen whether the Collector can in his review of the experiment show that a greater measure of success was obtained than I think likely or possible.

*(2) Egyptian Cotton.*

76. Concurrently with the distribution of selected seed an attempt to test the value of the black-seeded Egyptian cotton was made. In 1883 2¼ tons of seed were imported from Egypt. The whole crop was brought up and ginned partly with the saw-gin and partly with the steam-roller gin. Only 6 tons of seed were secured. An attempt to distribute this seed, without any promise of purchasing the crop, was made. Great reluctance was exhibited. My conviction, gained after much enquiry, is that the cotton is quite unsuited to the district. It grows well, but does not ripen seed. I find also that the Egyptian cotton was tried in 1832, 1857 and 1860. Each trial resulted in failure. At one time it was thought that earlier sowing would secure success. This plan did not succeed. I think there are grounds for desisting from further trial with this variety.

*(3) Saw-gins.*

77. One of the most important questions in Dhárwár is with respect to the saw-gin. A reference to the Gazetteer* will show the various steps which led to the introduction of this necessary concomitant of the American cotton which has established itself in the district, and the reasons why the management of the saw-gin factories still remains in the hand of Government. Three years ago it was discussed whether Government could not safely retire from the direct manufacture, distribution and repair of the gins; but it was resolved to await the advent of the railway, when it might reasonably be expected that steam saw-gins would be set up by private firms. The railway is opened, but there is no indication yet of any such enterprize. There are steam gins at Hubli and Gadag, but the roller pattern is used.

* Dhárwár Statistical Account, Vol. XXII., pp. 366-373.

78. I sought to ascertain whether the people could not now be left to themselves to arrange for the repair of their gins. There is a great deal of discontent among them. The factories are made self-supporting from a subscription of Rs. 6 per annum per gin from each owner. The tax may be evaded by the deposit of the saws and spindles at one of the factories. The owners are entitled to the services of trained hands on payment, over and above the general subscription, for wages and material. The complaint is that the trained workmen kept are too few, and that only those villagers who live close to the factory get any benefit. On the other hand, more labourers would entail a larger subscription, and apparently the people are not careful to have their gins repaired in the slack season, but wait till the ginning time comes, and then, finding something go wrong, all clamour for the factory men. At Hubli and Ingalgi the rayats assert that they can make their own arrangements, provided Government will assist them in procuring new saws and certain working parts and new gins when required; but every where else there was a consensus of opinion that Government must keep up the factories, and I believe this is a necessity. It can only be hoped that private steam saw-ginning factories may yet be started.

79. There is one gin worked by bullock power at Halyál near Hubli. At Devgiri I saw another being set up. There is a third, now not used, also near Hubli, and at Ingalgi there is a prospect of another. This utilization of bullock power must be encouraged. It will reduce the labour now falling on the factory workmen, for the rayat who works a gin with bullocks is in a position to employ his own skilled hand. It may be advisable to seek to introduce Gordon & Co.'s bullock power into this district (see para. 72 of my last year's Report). This machine has no place to fill in Khándesh, but there may be benefit in Dhárwár.

80. A new pattern of saw-gin has lately been introduced into Dhárwár. It is a great improvement; but the people, I think naturally, complain that the improved grid might have been adapted to the old frame work and other working parts, instead of necessitating their purchasing an entirely new gin. They do not like the new grid. It is too good, and cleans the cotton too well to suit the degenerated demands of the trade. The larger outturn of the old grid is solely due to the large percentage of seed carried through. The same feeling shows itself also in respect to the foot-roller. This rude implement worked by women can compete and does compete successfully with the steam-rollers, because the trade is not particular, and prefers buying cheaply half clean stuff to giving a remunerative price for well-cleaned cotton.

I may mention that the foot-roller—for indigenous cotton only—is the implement used all over the Southern Marátha Country, but that, strange to say, the hand *charak*, very similar to the Khándesh *charak*, is again found in the very south of the district.

*(4) Want of Fresh Seed from America.*

81. I noticed in my Report last year that there was a spontaneous demand for fresh seed in Bankápur of the white-seeded American variety, the only one of very numerous kinds which has really shown itself worthy of support. But I found that no further action had been taken. The seed has degenerated. It is harder and smaller than it was. Though a good year seems to check this degeneracy, there is, no doubt, need for new importation. The demand for new seed is not confined to Dhárwár. From Kolhápur I have received a large indent. I have placed myself in communication with the Chamber of Commerce, and fresh seed will be imported.

But I have decided on adopting a slightly different plan from that followed heretofore. Fresh seed is very expensive. It never does well the first year. I propose therefore to sow the seed in that part of the district (*e. g.* Bankápur) where the variety succeeds best, (I may notice that in the deep black-soil tálukás of Ron and Navalgund it gives a poor crop in comparison with the yield of the lighter black districts of Bankápur, Karajgi and Ránebennur) and to distribute the produce at a moderate charge. This plan I shall recommend to the Kolhápur State. Specific proposals will be made to Government for sanction to hire land for one year for the purpose.

*(5) Cotton Market.*

82. The Acting Commissioner Mr. Moore (last year's Report, para. 36), induced the Hubli Municipality to decide to establish a cotton market, and some prospect of a market at Gadag, (now an important junction,) was entertained. Nothing has been done. I discussed the matter with the leading traders and rayats of Hubli. The system of middlemen, which is very strongly established, militates against any such open dealing. The brokers have it all their own way; and it would be a positive disadvantage, if not ruin, to them if a cotton market were established, which would secure to the producer the benefit of competition among the buyers. On the other hand, it behoves the District authorities not to let the matter drop. An open market is greatly needed, and would alone effect much improvement to the prospects of good cotton.

*(6) Prospects of American Cotton.*

83. The valuable staple acclimatized from American seed is well established. Its cultivation is liable to fluctuations with the rise and fall of the demand for good stapled cotton, but it will not disappear. Its hold is especially strong on the three tálukás named in para. 81 above, and the large areas of the surrounding Native States. It does not do well in the deep black-soil tálukás. Its advantages are :—

1. That it can be put into the market sooner. It ripens earlier.

2. Its outturn becomes sooner certain, and advances can therefore be earlier secured on the crop.

3. Cleaned by the saw-gin it economizes manual labour, and this at the time when this labour is in great demand.

4. In good years its yield is very high.

5. Though more liable to blight than the indigenous variety, it possesses greater power of recovery.

The question of introducing this variety into neighbouring districts—*e. g.* Bijápur—is very important, but with its introduction the saw-gin difficulty must be met. In Bijápur this year experimental cultivation has been re-commenced, and saw-gins to gin the crop have been procured. The experiment is being carried out by the Assistant District Inspector, Agricultural Department, under the orders of the Collector. Its results must be awaited. If success is secured, its extension will be sought.

*(7) Khándesh Cotton.*

84. In reviewing the results of the distribution in 1883 of selected seed in Dhárwár, Government asked whether this method of offering rewards for good samples of cotton could not with advantage be extended to Khándesh and other districts. This reference has led to a very complete discussion of the position and prospects of cotton in Khándesh—the district next to Dhárwár where the largest expenditure has been incurred by Government to improve cotton, and where at the present time nevertheless the largest need for improvement exists.

Government Resolution No. 8507 dated 28th October 1884.

85. The subject of adulteration is of such importance that I feel it my duty here to state carefully the whole case before Government, for only a full statement can explain the final deliberate decision that practically nothing at all can be done.

86. The Secretary of State forwarded a communication received from the Liverpool Chamber of Commerce calling attention to the increased adulteration of East India cotton—a subject of very great gravity—a growing evil which seriously imperils the foremost staple of India, at the same time affecting and disturbing most grievously the cotton trade. In due course the opinion of the Bombay Cotton Trade Association was solicited. This body informed Government that their attention had already been directed to the matter in such a way that they had been induced to appoint a special

See Government Resolution No. 8066 dated 13th October 1884.

Committee to consider the question of mixing and adulteration in all its bearings. The conclusion arrived at was then announced—

"Having thoroughly considered previous legislative enactments on cotton frauds, and the discussions connected therewith, by the light of more recent experience, and having further before them the resolutions come to by the Liverpool Chamber of Commerce, they had nevertheless come to the conclusion that special legislation was not advisable."

The Association then formulated its advice to Government, *viz.*:—

(1.) That Government should discourage the growing practice of ginning different growths together, thus producing a mixed and deteriorated seed.

(2.) That Government should point out to the cultivators the benefit of persevering with the cultivation of the finer descriptions of the staple.

(3.) And that Government should aid them in procuring improved seed for that purpose.

With this advice it was suggested that the action initiated by Mr. A. T. Crawford, Commissioner S. D., in Dhárwár was a step in the right direction, and might be imitated in other districts with advantage.

The proceedings of the meeting held to consider the report of the special Committee were at the same time forwarded to Government.

87. The Chairman premised his remarks by stating that some of the members of the special Committee after perusal of the pamphlet issued by the Liverpool Chamber had entered on their deliberations with strong views in favour of special legislation, but that when the effect on the trade caused by the late Cotton Frauds Act was discussed, and when the manner in which the trade has been conducted since the withdrawal of special legislation was considered, the feeling became universal that further legislation was not advisable.

It was admitted that "a certain amount of admixture" had become prevalent since the abolition of the Cotton Frauds Act, and that this admixture was a decided evil, hurtful to the trade, and a source of loss to merchants. (It could not be expected that this meeting should concern themselves with the effect of admixture on the producers. That was not their province).

88. The Chairman gave his opinion that mixing had during the past season been of a less consistent character, and that professional mixers had not been so successful. He charged the native dealers with the origination of the plan of mixing, turning thereby their special knowledge of cotton to account. Mixed bales passed muster, and they became bolder. But the growth of the practice soon brought matters to a crisis, and a set of rules was formulated to combat the evil. The penalty clauses were, however, soon found unworkable. Contracts were made by the native dealers *inter se* with the omission of these clauses, and the European merchants were compelled to make them optional. But even with this relaxation of the stand taken against mixing, the Chairman thought that an improvement had set in.

89. The deliberations of the Committee were then described as to the form which legislation, if decided on, should take. Fatal objections appeared to arise against every suggested penal provision. In fine, it seemed clear that a mild Act would be unworkable, and that any other form of legislation would entail a completely equipped staff of Inspectors, armed with extensive powers, which would simply be the re-institution of the Cotton Frauds Department with all the features detrimental to trade which had brought about its abolition. Therefore it was decided to ask Government for aid.

It was prominently—but no emphasis could be too strong—stated that deterioration of seed was the great evil to be feared, and the grievous fact was noticed that during the previous year large quantities of Dholera cotton had been brought into Broach, and ginned with the fine Broach *kapás*. This, of course, meant irremediable mixture of seed, which would surely show itself in the coming crop.

90. Next, the improvement effected by Mr. Ashburner, by substituting Hinghangháti seed for the indigenous growth of the Khándesh District, was referred

to, and it was admitted that, *during the time in which the evil of admixture had risen and thriven*, the deterioration of Khándesh cotton had gone on. The deduction was justly drawn, that it was this admixture by the trade which fostered the deterioration,—in other words, which fostered the cultivation of the short-stapled Varádi.

91. The Chairman in proposing the form of letter in which the assistance of Government should be invoked, inserted a clause to the following effect—that it had been found from actual experience impossible, owing to the constitution of their own body, to establish and adhere to a set of trade rules which would effectually put a stop to the practice of mixing.

This clause was omitted by a majority, on the ground that the Association was quite strong enough to make a rigid set of rules, which, if loyally adhered to, would go a long way to putting an end to the system of mixing.

92. It remains to be seen whether this much-desired result can be effected by the Association. If the trade can and will stop the mixing, then Government's decision to do nothing at all will be fully justified. If, on the other hand, the trade cannot or will not stop mixing, it will, in my humble opinion, be incumbent on Government to seek to stop it without permitting interference with the trade or the obstruction caused by inspectors, to weigh against the demands of the country and the welfare of the rayat. But I am anticipating.

93. The Collector of Khándesh, Mr. W. H. Propert, was the first to lay before Government his estimate of the practicability of the advice offered by the Association.

He pointed out that no effort had been relaxed by the Revenue officers—(1) to prevent the extension of Varádi, for he had oftentimes gone near overstepping the bounds of legal authority to check its spread; (2) to encourage the cultivation of improved varieties, for at the Máheji Exhibition handsome prizes had been yearly awarded for the best samples of exotic cotton; and (3) to supply good seed, for the Government Farm had for its main object the production and distribution of as much good seed as possible, but that in 1882 the rayats got out of hand for two reasons. First, they had become fully aware that no restraining authority remained in the hands of the Collector, and, secondly, the price given for Varádi had reached or nearly reached that accorded by the trade to the better staples of the Dhárwári (acclimatized American) and Hinghangháti.

He showed that the producer has very little voice in the question as to what crop should be sown. He gets his seed from the middleman, and his crop is virtually disposed of, seed and all, before it is grown.

He admitted that the rayat prefers to grow the indigenous variety, which is reared with far more ease, and yields a heavier crop. When the demand rose for this commodity, it was very easy indeed for the middleman to extend its growth at will. And he asserted forcibly that if for one season (1883) the merchants had refused to buy Varádi, or had at any time within the past three or four years assisted him in his efforts to sustain the good name of Khándesh cotton, the Varádi cotton would have been virtually stamped out.

94. Next, turning to the question of the distribution of good seed, he indicated his reluctance to look again to the Berárs, because there was evidence that the system of admixture had worked harm there as well as in Khándesh, and there was little prospect of advantage from the re-importation of this Hinghangháti variety, which is not so valuable or generally suitable as the Dhárwári. And so with regard to Dhárwár; the fact of Mr. Crawford's movement to improve the cotton of that district shows that the staple has deteriorated there also. Therefore there is risk in applying for seed thence. But Mr. Propert argued that in Khándesh itself it is possible to collect a large quantity of good seed by separately picking the bolls of the exotic cotton grown in and among the indigenous crop, relying on the fact that the former ripens earlier than the latter.

95. I may parenthetically remark that good cotton can be procured from Dhárwár. Experience has shown that seed acclimatized there succeeds better in Khándesh than freshly imported seed; and though the Dhárwár seed has deteriorated, its transfer to Khándesh will almost certainly give fair results.

The plan, recommended by Mr. Propert of collecting seed in Khándesh, too, is feasible. But, as is clearly argued, there is no possibility, under present adverse circumstances, of getting good seed sown. By the kind offices of one of the leading merchants in Bombay I was informed that his up-country agents could not, if they would, at present induce cultivators to sow the exotic cotton. Perhaps this opinion should be received with caution; for, as all the reports tend to show, the rayat is not the arbiter in this matter.

96. Mr. Propert sums up with his advice that dishonest mixing should be made penal. He holds out the alternative that the Bombay merchants for one year should refuse to buy the mixed cotton. But the reply to this is that the merchants cannot afford to consider any such scheme.

97. The Commissioner Mr. E. P. Robertson—after, I think very wisely, insisting that the coercive measures adopted by Mr. Ashburner some years ago were altogether over-estimated as regards their good results—says that Government have no right to interfere by dictating to the people what cotton they should sow, but fully supports the demand for a law to punish adulteration—very pertinently remarking that the merchants can hardly plead for the re-imposition of the law which their vehement opposition caused to be abolished, however much they may be convinced that that law is wanted.

98. Independently I represented my view of the question. The object of my letter was to show that the advice of the Cotton Trade Association is futile, based on a misconception of the position of the rayat. I tried also to give reasons why the method of improvement initiated by Mr. Crawford in Dhárwár would do no good in Khándesh. I called attention to the late discussions in the Berárs, and to the late Mr. Ridsdale's able review of the whole matter, in which he showed that interference with the rayat is not justifiable on either administrative or economic grounds. This review was called forth by the resolution of a meeting that the action of Mr. Ashburner in 1873 had secured wonderful results in Khándesh, but had been detrimental to the Berárs, in that it caused an influx into that Province of the seed of the short-stapled variety ousted from Khándesh (which in the Berárs is called Khándeshi, and which in Khándesh is called Berári or Varádi), thereby working much harm, and that the imitation of the policy of Mr. Ashburner would rehabilitate the cotton of the Province. The Government of India, Revenue and Agricultural Department, prevented any action being taken by the plain statement of the plain fact that Mr. Ashburner's policy in Khándesh had not secured lasting results. I endeavoured to make it clear that though the Dhárwári cotton does well in some parts and some soils in Khándesh, it is not suitable to others—that it would be an evil to attempt to stamp out Varádi (or Khándeshi cotton), inasmuch as that variety is the only paying one in its peculiar soils. Further, that the production of Varádi has its recognized and justifiable value, though the cotton is useless for export, except for purposes of admixture.

99. I ventured to suggest that the earnest desire of the Cotton Trade Association to evolve a workable method of preventing fraudulent admixture, and the no less earnest anxiety of the District officers to assist in the movement would be best fostered by the appointment of a Joint Commission of merchants and Revenue officers to enquire into and discuss the whole matter. On the one hand the merchants would see how unworkable the advice offered by them really is, and, on the other hand, the Revenue officers would learn much as to the most feasible method of meeting the evil without disturbance of the trade.

With well-sifted information on the various points noticed, the Commission, I thought, would be in a position to recommend a feasible working plan. The merchants would then be entitled to call on District officers for co-operation, and the District officers would know what support they could expect from the trade. At present in their eyes, in spite of the enlightened and well-intentioned declarations and warnings of the organized mercantile associations, the trade is doing every thing it can to checkmate their efforts at every step.

I casually hinted at the feasibility of establishing warehouses near the ginning and pressing factories, where cotton received should be sorted and

cleaned. I need only say that this plan is universally declared to be unpractical, and I do not wish to pretend that I am able to elaborate a scheme in connection with it.

100. All these papers were considered by the Chamber of Commerce and the Cotton Trade Association. They were practically a challenge to the trade, and the trade could not take up the challenge. The former body explicitly stated that the admixture is due to a demand in Europe for inferior stuff.

> "So long as there exists a demand in the consuming market of Europe for the inferior descriptions of cotton, so long will merchants continue to purchase, middlemen to mix, and growers to cultivate it. No good end could be served by attempting to interfere with the natural course of the trade."

The Chamber went on to urge that there are signs of a re-action against mixed cotton, and advised Government to take energetic steps to distribute good seed throughout the districts, presumably to be ready to meet an improved demand.

The Cotton Trade Association in disposing of the reference contended that there are buyers in Europe of adulterated and mixed stuff on its merits, and that merchants are bound to deal in it. It is therefore presumable that much of the adulteration which now goes on is not fraudulent. Certainly the former proceedings of the Association gave me, at any rate, a different idea of the matter. It seems to me to be merely removing the fraud one stage further on, for these buyers in Europe of adulterated and mixed stuff on its merits, paying the high price they do for the chief ingredient (worthless on *its* merits) of the mixture, cannot be credited with honest dealing.

Resolution 4953 dated 17th June 1885.

101. The orders of Government were that no steps to stop the supply of a commodity which is grown to meet a demand by consumers can be taken. As regards the latest advice of the Chamber, it was pointed out that, till the improved demand for good cotton does arise, it would be premature to distribute good seed.

It must be drawn from these orders that Government do not approve of any legislation to check fraudulent mixing.

The course of events must be watched; but whatever is done in the matter must be done without consultation with the trade. It is, in my humble opinion, hardly fair to ask the merchants to show how the rayats can be protected from by-injury resulting from the course of the trade. On the other hand, the perusal of the deliberations of the Cotton Trade Association gives the fullest confidence that whatever can be done on their part will be done.

102. The Commissioner N.D., Mr. G. F. Sheppard, brought to the notice of Government a specific instance of the importation into Broach of 179 tons of Dholera cotton to be ginned. It may be presumed that this was for the purposes of admixture. Clean cotton cannot be successfully mixed. Mr. Sheppard also noticed that annually a very inferior variety of cotton is exported to Dhollera from the Kaira District. He enlarged on the greater danger from deterioration of the seed than from mere admixture of staples, and urged that the subject demands consideration in the interests, *not* of the trader, but of Government itself.

He contended further that it is easier to prevent admixture of seed at the beginning, than to restore the high character which a crop has once lost. He advised that the Collectors of Broach, Surat and Ahmadabad should be directed to watch importations of inferior "Kapás", and authorized to buy up the seed either pure or mixed. There can be no objection to such a plan. The seed would be useful for cattle food and the loss nothing, because it may be presumed that a lot of seed, stigmatized as mixed, would not knowingly be used for sowing. I trust that the Commissioner will carry his suggestion into practice.

103. Mr. Stormont of the Bhadgaon Farm made a short tour chiefly to ascertain the extent of admixture *in the field*. The following may be quoted from his report:—

"29. *Tour in Cotton Districts.*—About the beginning of February the Collector directed me to make a short tour in the eastern tálukás with the object mainly of finding out to what extent mixed cotton seed was sown by the cultivators; also whether, as alleged, merchants were paying preference prices for the short-stapled Varádi. My inspection embraced a circle of districts including Páchora, Bhusával, Sávdá, Chopda and Erandol. The results of the analysis of numerous samples are arranged in the margin.

TABLE VI.—ANALYSIS OF COTTON.

| Place. | Average Mixture. | | |
|---|---|---|---|
| | Varádi. | Hinghan-ghâti. | American. |
| | Per Cent. | Per Cent. | Per Cent. |
| Páchora ... ... ... | 25 | 30 | 45 |
| Yával ... ... ... ... | 58 | 40 | 6 |
| Arrawad ... ... ... | 70 | 30 | ... |
| Chopda ... ... ... | 75 | 25 | ... |
| Dharangaon ... ... | 50 | 20 | 30 |
| Erandol ... ... ... | 58 | 29 | 13 |

"30. A glance at the table will show that the crop of Khándesh still contains a fair percentage of good cotton. At Páchora it is nearly half American; the short-staple being only a quarter of the whole. This is admittedly due to the spare farm seed being annually sold in the neighbourhood. At Bhusával no reliable sample was obtainable, but about Yával the American element diminishes to 6 per cent.; at Arrawad and onward to Chopda it altogether disappears, until the vicinity of Dharangaon is reached, where with the Hinganghâti it makes up half the crop. Coming southward by Erandol the Varádi again predominates, being just outside the circle under the influence of the farm.

"31. *Opinion of Cotton Merchants.*—At Dharangaon a number of merchants and others met me to discuss the question of cotton improvement. The smaller class of local dealers were strongly opposed to any measures of restraint, declaring that although the price of Varádi was comparatively low, still the cultivators liked to sow a certain mixture, it being the more reliable poor man's crop.

"32. The Bombay buyers, on the other hand, were unanimous in opinion that only the operation of an Act could ever restore the reputation of Khándesh cotton and the consequent prosperity which its producers enjoyed for so many years. All, however, were agreed as to the beneficial results which must necessarily follow the distribution of large quantities of good seed."

104. It seems to me that Mr. Stormont has missed one point, deducible from his enquiry,—that is, that the further he went from the railway and from cotton centres (*e. g.* Dharangaon) the less the percentage of good staple. This fact would seem to show that the suitability of the indigenous variety, apart from the support accorded by the demand for admixture, has a strong bearing on the increase of Varádi. The deduction may be wrong, but if it is correct, it is a warning that a place for this variety must be recognized as necessary (see para. 98 above).

*(8).—Nankin Cotton.*

105. **Nankin Cotton.**—About the end of June 1884. the Government of India supplied 10 maunds of seed to test the suitability of the Nankin or *Kháki* coloured cotton for the summer clothing of the troops, in place of the dyed cloth. A guarantee was given that the produce would be purchased at 4 annas per lb. of clean cotton.

The results of the distribution were as follows:—

*Haidarabad Farm.*—The experimental plot was close to a plot of Sindi cotton—both irrigated and similarly treated. The outturn of the former was 478 lbs. of seed cotton valued at Rs. 26, while that of the latter was 1,238 lbs. worth Rs. 68. The lint and seed were in the proportion of 1 to 3 by weight. Mr. Strachan suspects this cotton to be a sport and not a true variety.

*Bhadgaon Farm.*—Two fields were sown, one in June and the other a month later. The outturn was 34 lbs. and 24 lbs. of clean cotton per acre respectively. The proportion of lint to seed was as 27 to 73, which in Mr. Stormont's opinion is a low proportion.

*Kaira.*—Here the seed was distributed to the farmers through the Desái of Nadiád. The season was very unfavourable. Very heavy rains washed the plants out of the ground. Only in about half an acre belonging to the Desái, the plants survived, but the yield was miserable—only 2 lbs. of clean cotton.

*Ahmadnagar.*—The absence of rain made dry-crop cotton impossible. Though the seed was distributed to several who were anxious to experiment, only one pound was actually sown, and that on the High School Farm under irrigation. The seed was sown alongside plots of acclimatized New Orleans cotton. Both received similar treatment, save that the latter was sown a fortnight earlier. The Nankin yielded 80lbs and the New Orleans 280 lbs. of seed cotton per acre.

*Sholápur.*—Here again rain was absent. 6 lbs. of seed were sown on 10th September under irrigation on the High School Farm. The seed germinated badly, and the plants all died under heavy rains of October.

*Dhárwár.*—The seed was distributed equally in 4 tálukás, 5 lbs. being given to each selected cultivator. The seed was good and germinated, but the season was most unfavourable from want of rain, and the crop was poor. The Collector remarks that the staple is strong but short, and adheres very firmly to the seed; the foot-roller will not clean it, and it is very doubtful whether the saw-gin is adapted for separating the lint from the seed, which, like that of indigenous cotton, is small, and will pass through between the grids of the saw-gin.

106. The cultivation of Nankin cotton in this Presidency has not got beyond the experimental stage, and even experimental cultivation is in its infancy. The only instance known of a farmer growing this cotton on his own account is in the Shevgaon Táluka of the Ahmadnagar District, where one Náráyan Raghunáth, a Bráhman holder of some means, cultivates it yearly as a garden crop to the extent of 5 gunthás. The seed is said to have been imported from Delhi about twelve years ago. The cultivator manufactures the produce into cloth for his own use.

107. My opinion of the trials was as follows :—

'On the whole, although the outturn under experiment was smaller than that of the local variety, it is not to be doubted that as large an area as may be desired can be grown with this cotton if the Government of India continues its offer of four annas per lb. of clean lint; but without such a stimulus it is not at all likely to be grown at all. I am very much averse to attempting to force this variety on the country. It may injure our staples by hybridization. Its seed may get mixed with the other varieties, and a most harmful, undesirable mixture will result, which once established will take long to remedy. No alacrity is shown by the Military Department to utilize the natural Kháki cotton in lieu of the dyed material, and it is not unlikely that a mordant may soon be discovered which will prevent the now unsatisfactory variations in the colour of dyed Kháki. Again, experiment has yet to be carried on to decide whether the colour of the Nankin cotton can be relied on. I have instituted experiments on this point at the Haidarabad Farm. The Nankin cotton has no merit as to staple or yield; and my advice on the matter, as it stands at present, is that all attempts to force its growth should be abandoned. I earnestly ask that pressure may not be brought to bear on me to do more than experiment with this variety.'

The following extract from a letter of the Chamber of Commerce—to whom a small sample of the Shevgaon cotton, which was decidedly superior to that grown on the Bhadgaon Farm, was sent—also supports my view :—

'The staple is short, irregular and wasty, and would be most unprofitable stuff to work. Under the circumstances the Committee would strongly advise that the cultivation of this description be confined to those places where it is indigenous, as there would be great danger of its hybridising with the local varieties to their detriment if introduced largely into this Presidency.'

108. **Jute.**—The experiment suggested in the last year's report is considered by the Superintendent of the Farm not likely to prove of any value. I shall, however, give further consideration to the matter.

109. **Manilla Hemp.**—I have not received any intimation of experiment on the lines indicated last year, but adhere to my opinion that the plant cannot compete with the common plantain. I would quote a Kánarese proverb—"*Báligidadolage giládde illa*"—*No part of the plantain tree is without its use.* This cannot be predicated of the *Musa textilis.*

110. **The Carob Tree.**—Further trials have been made, but with so little success that experiments have been discontinued. Both Conservators of Forests give their opinion that the tree will not pay further expenditure, and that there are many indigenous plants which better merit attention

Government Resolution No. 7742 dated 25th September 1885.

in the matter of encouraging trees which will produce fodder in time of drought. It does not seem necessary to detail the list of failures, but some facts collected at the Bhadgaon Farm deserve record. The plantation contains 125 well-established trees, but these are occasionally watered. Many are 20 feet high. The best yield from one tree was 1,140 pods, weighing dry 28 lbs. Compared with some locust beans bought in an English shop, the pods were less developed, but nearly as sweet. To test the power of the tree to withstand drought irrigation was withheld. One tree died, but others did not apparently suffer. The fruit was, however, deficient in saccharine matter, and inferior to that of irrigated intercultivated trees. Watering was re-commenced in May to save the plantation.

111. **The Rain Tree** *(Pithecolobium saman).*—Experimental cultivation was commenced in 1880 in the hope that this would prove to be a valuable road-side tree. I have kept a record of the various trials since that date, which will be useful, should the tree come in again for favour in high quarters. Suffice it to record here that the best that can be said of it is that in irrigated land of fair garden quality the tree shows a rapid growth, but even in the most favoured situations it is a straggling plant with scant leaves and useless for shade. Some advocate further cultivation, but the decision arrived at is that further experiments may be left to those who desire to make them. Seed can be procured from established trees.

Government Resolution No. 4372 dated 30th May 1885.

112. **Manilla Tamarind** *(Inga dulcis).*—This tree was expected to prove of value as a road-side tree. It was first introduced into Bombay by Dr. (now Sir George) Birdwood. It showed wonderful rapidity of growth where a wet sub-soil or occasional irrigation was available. In 1883 it was sown in Násik. The Collector reported 'that the seed germinated well, and that the tree will serve as a good road-side tree as it grows luxuriantly and rapidly, particularly in light soil.' The Commissioner added—(1) the tree is well suited to the country; (2) its pods and leaves are valuable cattle food; (3) it is suitable for hedging land to be closed as forest; (4) there is a variety of the *Inga dulcis* indigenous to the country. I have not yet been able to identify this indigenous variety. In December 1884 parcels of seed were distributed over the Presidency. In reviewing the reports, Government directed the Collector of Násik to continue experiment with it as a road-side tree, and ruled that, if other District officers so desire, they may make trials at their discretion.

113. The **Divi Divi Tree** has also secured successful results, and merits further extension. I have noticed it in para. 45 above.

114. **Arrowroot** has in two places during the year been prepared from *Maranta arundinacea.* Mr. Woodrow of the College of Science obtained 8 lbs. of pure starch from the produce of 200 square feet of ground (94lbs. of roots, weighed freshly dug=9 tons per acre), and a native gentleman, Mr. Náráyan Gogte at Dápoli in Ratnágiri, who has been experimenting for five years, prepared 350 lbs. which on examination, both microscopic and chemical, proved to be fully equal to the pure Bermuda arrowroot. I have kept a record of the manner in which the plant was propagated, and the rhizomes converted into starch both by Mr. Woodrow and Mr. Gogte. The latter is in need of suitable appliances. Mr. Woodrow recommends a pulper, such as is used in England in preparing cattle food, to grind the roots, and a vowel-washer to wash the pulp. Mr. Gogte applied for the assistance of Government to secure a sale for the product of this new industry. A reference was made to the Commissariat Department. Government were informed that the requirements of this Department are yearly about 5,000 lbs., but it was intimated that the supply is obtained at an average rate of 4 annas 8 pies per lb., whereas Mr. Gogte cannot sell it cheaper than 12 annas, though with better appliances the cost will be much reduced. The price put on by the producer is very much less than what is demanded in the shops, and I am strongly inclined to think that the supplies obtained by the Commissariat Department are of arrowroot prepared from other plants than *Maranta.* If so, the Commissariat Department would, I think, do well to have their arrowroot analysed. I notice that the contract rates of the Commissariat vary from 1½annas

per lb. The fact appears conclusive that they are supplied with inferior arrowroot which can be very cheaply obtained from indigenous plants of the ginger tribe, *e.g.*, *Curcuma caulina*. This plant is abundant at Mahábaleshvar and other elevated localities. Dr. McConaghy in his account of Mahábaleshvar notices that the 'wild arrowroot' was for many years made for the Commissariat by Chinese ticket-of-leave prisoners. 'Judging from the market value, five to six pounds to the rupee, it is very inferior to West Indian arrowroot. In 1878 an European resident prepared it at a cost of 5½ lbs. for the rupee. The colour and taste were pronounced good, but it was found deficient in nutritive properties, and the owner was obliged in the end to sell it at 8 lbs. the rupee.'

The Commissariat Department contract for arrowroot to supply the hospitals, and this being so, the use of an inferior substitute of a substance of such limited demand seems to me unjustifiable, and, therefore, Mr. Gogte deserves more encouragement than he has received.

When the papers connected with Mr. Gogte's application for support were published, an attempt was made to show that I was incorrect in styling the Mahábaleshvar arrowroot, wild arrowroot. It was further asserted (*Times of India*, 22nd July 1885,) that the arrowroot was introduced from Ratnágiri to Mahábaleshvar. Dr. Lisboa, the well-known botanist, replied to the newspaper article, and showed that the writer to the *Times* was in error. I borrowed the term "wild arrowroot" from Dr. McConaghy, but it is a correct one, as that starch was prepared from a wild plant. The *Curcuma caulina* is not found in Ratnágiri.

115. As regards the Bastard Cedar (Guazuma tomentosa), I have no fresh information to record. Experiments with the Golden Plantain and Italian Turnips have already been noticed above (para. 45). Arabian Date Palms have been grown with fair success at the Bhadgaon Farm, but the climate is uncongenial. The measure of success secured is adequate to justify the decision made, that as soon as suckers are available, they will be tried in Surat or other district where the common date palm thrives.

116. As regards **Maize**, the trials at the Bhadgaon Farm have been detailed above (para. 45). But in the Panch Mahâls District, where maize is a staple, trials have been made since 1883 with seed from America without success. There seems reason to believe that circumstances in each case, irrespective of the seed, partly explained the want of success. Further trial may hereafter come up for consideration.

## E.—Forecasts of Cotton and Wheat.

Government of India's circular No. 89 A. dated 25th July 1884, and Government Resolution No. 7298 dated 12th September 1884, Revenue Department.

117. Forecasts of cotton and wheat prepared from such information as could be obtained from the overworked Revenue Establishment were submitted to the Government of India. A printed circular letter embodying the orders of Government and fixing the dates for the submission of the reports was issued to the District officers with the approval of the Divisional Commissioners. The reports received from the Collectors and Political Officers were, in many cases, unpunctual and meagre, and no information was received from the Baroda State, the lands of which are extensively cultivated with both the crops.

The Baroda Government have, however, kindly promised to make special arrangements to supply full and timely information this year.

118. Telegraphic messages were, from time to time, sent to the Government of India, showing—

(1.) The area under cultivation as ascertained on the earliest date, with the causes of increase and decrease;

(2.) The effect of the weather on, and the condition of, the crop; and

(3.) The nature of the harvest, prices, and the course of trade.

119. The year's results may be thus briefly summarized:—

## A.—Cotton.

120. The area under cotton was:—

| British Districts. | 1884-85. | Average of previous 5 years. |
|---|---|---|
| | Acres. | Acres. |
| Sind ... ... | 63,674 | 55,185 |
| Gujarát ... ... | 534,381 | 527,848 |
| Deccan ... ... | 898,610 | 910,669 |
| Karnátak ... ... | 760,405 | 778,142 |
| Total ... | 2,257,070 | 2,271,844 |
| Native States (excluding Baroda) ... ... | 2,116,004 | ..... |
| Grand Total ... | 4,373,074 | 2,271,844 |

**Sind.**—Very little cotton is grown, except in Haidarabad where the area was 47,000 acres. Though in Karáchi the late rainfall was excessive and injurious, and in Haidarabad there was a blight, the crop on the whole flourished, and yielded a return varying from 7½ to 14 annas.

**Gujará't.**—The chief cotton-producing districts are Broach (225,534), Ahmadabad (204,730) and Káthiáwár (1,711,515). The area was above the average except in Ahmadabad, but was below that of the last year except in Káthiáwár. This decrease was due to excessive and long continued rainfall. The crop was good in parts of Káthiáwár, but in other districts it was much damaged by excessive rain. In Broach the crop was put in late. The crop was a 5-anna one in Ahmadabad and an 8-anna one in Broach.

**Deccan.**—The chief cotton district is Khándesh (853,575). Except in that district the area was far below the average. This decrease was owing to deficiency and in some cases to the total absence of early rain and also to anticipated repetition of experience of last year, when the crop was damaged by late heavy rains. This experience was realized in Násik and Khándesh. In Khándesh there was much damage from shedding during cloudy weather. The crop was 7 annas in Khándesh, 3 annas in Ahmadnagar and Sholápur, 6 annas in Násik, and 1 anna in Poona.

**Karna'tak.**—This tract comprises three of the best cotton districts in the Presidency—Dhárwár with 385,068 acres, Bijápur with 270,820 acres, and Belgaum with 104,517 acres. The area was less than that of the last year and, except in Dhárwár, below the average. The decreased area was confined chiefly to black-soil districts where the early rains were scant or altogether absent. In Bijápur and in parts of Kolhápur the crop was a complete failure. Shedding during cloudy weather caused injury in places. In Belgaum and Dhárwár the crop was 7 annas.

Generally speaking the cotton crop of the Presidency during the year was far below the average in yield.

## B.—Wheat.

121. The area under wheat was:—

| British Districts. | 1884-85. | Average of previous 5 years. |
|---|---|---|
| | Acres. | Acres. |
| Sind... ... ... | 273,744 | 266,310 |
| Gujarát ... ... | 494,645 | 325,050 |
| Deccan ... ... | 914,865 | 791,811 |
| Karnátak ... ... | 669,187 | 290,839 |
| Total ... | 2,352,441 | 1,674,010 |
| Native States (excluding Baroda) ... ... ... | 344,157 | ..... |
| Grand Total ... | 2,696,598 | 1,674,010 |

**Sind.**—Except in Thar and Párkar, the area was above the last five years' average and above that of the preceding year. Shikárpur (161,046 acres) is the best wheat-producing district. The crop was much benefited by the rainfall in December, though in some parts it was affected by rust. The yield varied from 12 to 14 annas.

**Gujara't.**—The area was above the average and that of the preceding year in all the districts. The increase in area was due to favourable rainfall. Land sown with kharif crops and cotton, which were injured by the excessive rainfall, was re-sown with wheat. The chief wheat-growing districts are Ahmadabad (274,043) and Broach (119,238). The rainfall in November and December benefited the crop, which varied in yield from 8 annas in the Panch Maháls to 14 annas in Surat and Ahmadabad. In Broach the prospect of an excellent harvest was so marred by unfavourable weather in the latter part of the season that the yield was reduced to 9 annas.

**Deccan.**—The chief wheat districts are Násik (263,999), Khándesh (255,850) and Ahmadnagar (249,518). The area was above the average, but below that of the preceding year. This decrease was due partly to low prices of wheat and partly to more extensive rabi sowings last year through the fear of locusts. The crop at first suffered greatly from want of rain. The rain of November and December improved prospects considerably; but the gain was counterbalanced to a great extent by the prevalence of rust, which was general and in some places very severe. The late rains, too, had the effect of seriously deteriorating the quality of the outturn. Many samples which I have seen of hard white of the Deccan prove that it degenerated into a sample of little export value. Generally speaking, the Deccan crop was considerably below the average, and varied from 7½ annas in Khándesh to 1 anna in Poona.

**Karna'tak.**—This includes the rich districts of Dhárwár (399,809), Bijápur (161,571) and Belgaum (107,807). The area was above the average in all, but below that of the preceding year in Bijápur. The increase was due to sowing wheat on land left unsown owing to want of early rain, and was most conspicuous in the black soil plains, where wheat is a large crop. The crop did not give a fair return, as it was sown too late and in uncongenial soils. In the north half of Bijápur, where the rain was most unfavourable all the year round, the crop was a complete failure.

Generally speaking, the crop of the year was good in Sind and Gujarát, and was poor in the Deccan and Kánarese districts.

122. As regards the outturn, the information available is yet very incomplete and untrustworthy. A set of formulæ for the calculation of the outturn has lately been prepared and sanctioned by Government. As the anna valuation for each táluka required for purposes of calculation was not shown in the district returns, it is not advisable to attempt an estimate.

123. The wheats of the Presidency that are received in Bombay for export are the hard white varieties from Násik, Ahmadnagar and Khándesh for the markets in South Europe, the soft red from Ahmadabad and the neighbouring districts, and the soft kinds (red and white) from Sind for the English markets. In the absence of trustworthy trade statistics it is not possible to ascertain how much of these wheats was received in Bombay from these districts for export to Europe. The hard white wheat received in Bombay from the Deccan during the last season (March—June) was much less than usual owing to unfavourable season. The produce was locally consumed, partly because the outturn was only enough to meet the local demand intensified in some places by the deficiency of other food crops, jowári and bájri, and partly because owing to rust the grain was unfit for export. Some of the samples of hard wheats of the Kánarese districts have been pronounced by the Chamber of Commerce very suitable for export, and these wheats will add considerably to the total trade for the Presidency on the completion of the Southern Marátha Railway.

124. The year's forecast reports were, on the whole, meagre and unsatisfactory. Owing to the fact that District officers were on tour at the date of the reports, most were received through the stationary Huzúr Deputy Collectors, who, because they are stationary, could add no remarks explanatory of the returns. The valuable opinions of the Collectors and their Assistants, gained independently during their tours, were thereby conspicuous by their absence. To secure uniformity and punctuality, and to avoid chances of error and misunderstanding in the preparation of the forecasts, simple returns asking for information on those points only on which details can be obtained without entailing extra labour on the establishment, were prepared with instructions regarding the manner in which they are to be made out, and circulated to the District officers with the approval of the Divisional Commissioners. In the British districts it has been arranged

that the Mámlatdárs should, to save time, send printed returns, duly filled in, direct to the Director of Agriculture, forwarding at the same time a copy of the return to the Collector of the district through the Assistant Collector in charge of the táluka, in order to enable that officer to write his remarks and opinions. The Assistant Collector will send his remarks to the Collector, forwarding a copy of the same direct to the Director of Agriculture. The Collector will favour the Director with his opinion. Thus the opinions of the District officers will, as a rule, reach the Director of Agriculture in proper time.

125. It is hoped that the new arrangements will give better results. In their letter No. 102 A—6-155, dated 14th July 1885, the Government of India desired to be furnished with forecast details regarding oil-seeds on the plan laid down for cotton and wheat. But it will not be wise to extend the forecasts to oil-seeds and other crops of export value till a higher standard of correctness has been attained with respect to wheat and cotton, and till the Circle Inspector staff has been extended. When that staff is spread over the Presidency, it will be possible to imitate the American plan of compiling progress details, with regard to the most important crops, from the reports of the Inspectors placed for this purpose in direct communication with this office, and to telegraph periodically the general statements desired by the Government of India. The plan prevailing in the North-West Provinces, of selecting private individuals in each district or táluka to make report of the progress of crops, is not suited to a rayatvári system.

### F.—Agricultural and Cattle Shows.

126. The Agricultural Department has not yet been able to take up the question of establishing shows, but has sought to encourage spontaneous efforts in different localities.

127. It is well known that Lieut.-Colonel Nutt, now Acting Political Agent in Káthiáwár, has popularized shows of cattle and agricultural produce in Gujarát. The show at Gondal in Káthiáwár in December 1883 was the 7th agricultural meeting which has taken place under Lieut.-Colonel Nutt's management, and its success was very marked. The Nadiád Agricultural Association has followed suit.

128. In the Deccan, the Ahmadnagar Horse and Cattle Show has established itself as an annual institution, and under good management has gained success. In Poona, last year, an Agricultural Show was held for the first time independently of the Horse Show. The Máheji Show (in Khándesh) which as a Fair flourished for many years before 1833, when it was taken under Government management, has been temporarily suspended. This Exhibition combined the characteristics of a Horse and Cattle Show, a show of Agricultural Produce, and a Fair for the exhibition and sale of various articles of local manufacture. The chief cause of the decrease in popularity of this Exhibition, no doubt, was the opening of the railway. Traders found it more profitable to exhibit their wares in Bombay and other trade centres than at the once well-attended Máheji Fair. In sanctioning the discontinuance of the Show, Government directed me to keep in view the desirability of renewing the Cattle Show and Agricultural Exhibition at a more suitable centre of the district, when the condition of the Agricultural Department may permit of its undertaking the management of such Shows and Exhibitions.

Government Resolution No. 6509 dated 13th August 1884.

129. In the Southern Marátha Country a most successful enlargement of an old annual fair at Chinchli near Kolhápur was organized by the Kolhápur State in 1883. Annual shows (Horses, Cattle and Agricultural Produce) have been established. In the Dhárwár District at Karvati on the Tungbhadra there is a cattle fair yearly held, and close by in the Bellári District of Madras is the Mairál Fair. This latter I visited in February. The bad season in all black-soil districts, however, seriously affected its success. There were numerous cattle, but not of high quality as they usually are. But it is at these fairs that the agriculturists make their yearly purchases of iron for agricultural implements, sickles, bill-hooks and the like.

130. It is thus evident that spontaneous efforts are made all over the country in the improvement and enlargement of Agricultural Shows, and the time will, I trust, soon arrive when the Agricultural Department will be able to take a more definite share in their encouragement.

131. The Royal Agricultural Society of England adopts the plan of superadding its funds and support, each year, to a well-established local show. By its prizes and by the attraction which it offers to the exhibition of new inventions, the "Royal" show is very largely attended. The visitation thus accorded to a local show gives it an impetus and support which cannot be overrated. The Agricultural Department cannot do better than imitate the example of the Royal Agricultural Society. If Government will sanction a considerable sum to be utilized in prizes for cattle, awards for improved implements and machinery, it will be possible for me to organize a Provincial Show yearly. The show should be the substitute, year by year, of one of the local shows. It should be held one year in Gujarát, the next in the Deccan, and the third in the Southern Marátha Country. At such a show it will be possible to invite implement-makers in Europe and America, as well as in all parts of India, to exhibit their improvements. It will be also possible to invite the officers of the Agricultural Departments of other Presidencies and Provinces, who cannot come to a local show, and the show would certainly be attended by those interested in agriculture both in the Presidency and beyond it. The opportunity could be utilized to discuss agricultural improvement in all its bearings. It would be the duty of my Department to record results, as is done by the Royal Agricultural Society. I have here enlarged on this subject, in order that I may invite criticism on the proposal, and thus gradually bring it into shape for a definite request for support to the Government.

132. In November 1884 I attended the Ahmadnagar Show. To the funds Government contributed Rs. 500 and Local Funds Rs. 300. The expenditure in prizes amounted to Rs. 1,856. I served as one of the judges of cattle. In December 1884 I took part in the organization of the first Cattle and Agricultural Show at Poona. Cattle were heretofore brought in small numbers to the Horse Show held in September, but were an unappreciated supplement. The time of year in which the Horse Show is held is unsuitable for cattle. The funds were thus secured :—Government contribution Rs. 500 ; Local Funds 500. The rest came from subscriptions spontaneously offered. The amount awarded in prizes was—for cattle Rs. 700; agricultural field produce 300; garden 140; essays 125 ; total 1,265.

The essays were invited on the following heads :—

| | Rs. |
|---|---|
| 1. Rotation of crops ... ... ... ... | 50 |
| 2. Potato cultivation in the Poona District ... ... | 25 |
| 3. Manures available in India ... ... ... ... | 25 |
| 4. Wheat cultivation in Bombay ... ... ... | 25 |

Some of the essays were really good, and the best have been printed in part by the Committee and in part by the Editor of the *Shetkari*.

The show is not to be held this year, because Government can give no support, and it is a question whether the show should not be biennial.

133. I visited the Nadiád Show in March, and acted again as Cattle Judge and Judge of Agricultural Produce. The funds received no addition from Government grant, which was not solicited, but were supplied by the Nadiád Association, aided by subscriptions. Several Chiefs contributed. The sum of Rs. 1,040 was distributed in prizes. The Nawáb of Junágad, it may be noticed, sent about a dozen *patels* or village headmen at his own expense with an officer to show them the exhibits.

134. I was unable to visit the Chinchli Show, though I received a cordial invitation from the Regent of Kolhápur, as I was at the time present at the Mairál Show.

## G.—Manufacture of Sugar.

### *(1).—Sugar Refinery at Poona.*

135. A sugar factory was established in 1883 near Poona by a Pársi gentleman, Mr. Ádarji Dorábji Ghásvála. At the Poona Show of 1884 excellent samples of sugar were exhibited. But the enterprize, which I consider from an agricultural point of view to be of the highest importance, is languishing, simply because the necessary by-product—rum—cannot be disposed of. The sale of rum is only possible through the licensees for the sale of imported liquor, and necessarily it comes into competition with Mauritius rum, cheap brandies, and the like. That in the long run this rum will establish itself, cannot be doubted. It has done so in other parts of India where sugar refineries have long existed, but here a taste for it must gradually arise. If the rum cannot be disposed of the factory will fail. Mr. Ádarji has lately, in a well-argued and moderate petition, placed his case before Government. He asks for permission to open retail shops to sell the rum. Whether such permission can be granted without infringement of the monopoly already accorded to licensees of imported liquor is not a question for my department, but it is my duty to record my sympathy with the enterprize, provided the manufacture of sugar be maintained as the main object of the factory. The cultivation of sugarcane has so extended that the price now obtained for *gúr* is almost prohibitively low. It may fall further still, and sugarcane will not be grown with profit.

With a brisk manufacture of sugar, a large extension of cane cultivation is certain under the Khadakvásla Canal which runs close by the factory. Further, it will be in the interest of the manufacturer to seek to improve the cultivation of the crop.

### *(2).—Sugar from Toddy.*

136. *Surat.*—The subject of a second attempt to introduce the manufacture of sugar from the date-palm has received full attention. The former trial was made in 1874 and 1875 at Surat under Mr. T. C. Hope, the Collector. The success of this manufacture at Jessore induced the attempt. I carefully studied the records of the first trial, which, on the whole, was unsuccessful. Mr. Hope came to the conclusion that no reasonable prospect could be entertained of success unless irrigable plantations of trees set close together, to reduce the cost of tapping to a minimum, were made, and that Government must set the example. Government while expressing willingness to exempt trees utilized for sugar manufacture from the tree-tax, under conditions which would prevent any danger to the excise revenue, directed me to ascertain whether any private person would undertake an experiment in making a plantation with irrigation on these terms.

I visited Surat to inspect the trees belonging to a gentleman who, owing to the increased rate of tree-tax, found the tapping for liquor unprofitable, and who was ready to place his plantation at my disposal for experiment. But the irregularity of growth and the long neglect from which some of the trees had suffered, forced me to decline the offer.

From Thána also offers were received, but these all proved unacceptable. I am not, therefore, able to secure a proper conduct of further experiment by the aid of private persons.

I must notice that the Honorable Mr. Khanderáv Ráste gave attention to the subject. He obtained sanction, unknown to me, to prosecute experiments. The experiment was not made in the light afforded by the old Surat trials, and proved a failure. It is just possible that Mr. Ráste may make further endeavour; but, if he does, he should first thoroughly acquaint himself with the facts elicited in Surat, and then should visit Jessore, as I have had the opportunity of suggesting to him.

I fear that till the A'bkári Commission has submitted its report, and till orders thereon have been passed by Government, the owners of date-palms and other palms capable of producing sugar will not listen to overtures for private experiment.

*(3).—Sugar from Sorghum.*

137. The commencement of experiment under this head has been narrated in my remarks on the Bhadgaon Farm.

*(4).—Native Manufacture of Sugar.*

138. Coarse sugar is manufactured in Kolhápur and in parts of the Belgaum District. A short, but careful, description of this rude process was given by Mr. W. S. Price, Assistant Settlement Officer, in the 4th number of the *Indian Agricultural Gazette.*

The process is clearly susceptible of very radical improvement. It will be seen whether the Cook's evaporator, which will be tried at the Bhadgaon Farm, will show itself worthy of use for cane sugar.

H.—CHEMICAL MANURE.

139. Mr. S. Cooke, Professor of Chemistry, &c., at the College of Science, has taken out a patent for the preparation of a highly concentrated chemical manure. The raw materials are ashes, lime, and ground bones. The product is a light, very friable, pumice-like substance, containing various phosphates of lime, especially the bicalcic phosphate, carbonate and silicate of potash, and carbonates of magnesia and lime, &c. These compounds exist in the manure in forms readily soluble, and therefore assimilable by the plant. The manure is, therefore, a quick-acting one. It is in a form in which it can be easily drilled in with the seed, or used as a top dressing. It is perfectly inodorous and easily transportable. The ingredients are all obtainable in the country. The manure is stated in the specification to be a general manure. But it is properly speaking a special manure, inasmuch as it does not supply one of the most important constituents of plant food—*i.e.* nitrogen; but this ingredient can be superadded by the use of poudrette, or green manures, or simply by the addition of purely nitrogenous or ammoniacal manure. The invention seems to point out a most valuable method of utilizing—

(1) the vegetable refuse of large cities, *e.g.* Bombay; and (2) bones.

The increasing export of bones has necessarily attracted great attention from those interested in the agricultural welfare of the country. Lieut.Colonel Nutt in 1883 brought this export to the notice of Government, and asked for legislation to put a stop to it. The decision of Government* was that legislation was inadvisable, and Government approved of my view of the matter, that the stoppage of the export should be effected by the creation of a counter-demand, which would very soon make the export unprofitable. It is with interest, therefore, that I view Professor Cooke's invention. If it meets with support, the export of bones will cease immediately.

*Government Resolution No. 8365 dated 15th November 1883.

140. It behoves me to state that the process demands, first, the *burning* of refuse vegetable matter to obtain the potash, and the *grinding* of bones to make the chemical action speedy and complete. Where bones and vegetable matter and lime can be obtained on the spot, it would hardly pay to convert them into a concentrated manure. Rather would it be better to treat the ground with the ingredients separately, and leave it to form them into the required compounds. This, however, would be a slow process, and the manure would then not be a quick-acting one. Bones, especially if not ground, require years to decompose. I consider the invention a valuable one, and especially worthy of the attention of the Municipal Corporation of Bombay; but before other uses can be expected of the invention than the convenient and profitable disposal of city sweepings, it has to be shown distinctly what the manurial value of the substance is as compared with the value of the same quantity of potash and phosphate of lime otherwise procurable in the cheapest form. The proportions in which the ingredients are present in the manure will have to be guaranteed by any company which takes up the invention before it can be purchased and the price will vary according to the proportions found by chemical analysis. The process is simple, and in every way unobjectionable from a sanitary point of view. A company, if formed, would, of course, import machinery to grind the bones.

141. Indirectly this manure has been suggested as a substitute for ráb. I intend to try it during the experiments which will be made in the coming season; but, without anticipating results unfairly, I may note that I have no hope of success in the matter. The suggestion was made under a misappreciation of the functions of ráb.

## I.—Ensilage and Fodder.

142. In my last report I fully described the steps taken up to date in the experimental introduction of ensilage, and the construction of the silos for the experiments of which the results have now to be recorded. When the large masonry silo was opened out it was evident that at least 300 lbs. per square foot of weight had been given instead of 200 lbs. as was estimated. Further, it must be noticed that a very heavy fall of rain in October caused the mass to sink nearly a foot below the top of the silo, and lower than was expected.

143. The silo was opened on the 17th April 1885 in the presence of a Committee composed of the Executive Commissariat Officer, the Officer Commanding the Mountain Battery at Poona, the Depôt Transport Officer, and the Inspecting Veterinary Surgeon, with Lieutenant-Colonel Warter, R. H. A., as President. A considerable number of gentlemen, European and Native, were also present.

144. I stated in my last report that the chief object of making an experiment in Poona—which is not a neighbourhood where a deficiency of fodder in the hot season is often experienced—was to enlist the co-operation of the Commissariat Department in the endeavour to test the value of ensilage, and to introduce the practice if found profitable.

145. There are many *kurans* or grass lands in the charge of the Commissariat Department which are now managed by contractors under condition of their supplying grass to the Department. If ensilage is worth anything at all, its first adaptation will be to such *kurans*. The first growth of grass will be cut and stored in silos, and the aftermath, cut after the rains are done, for dry grass or else grazed: a double crop will thus be secured. The silaged crop may be kept for years, and may be specially utilized as a reserve to be used when sudden and unforeseen demands for grass and fodder are made on the Commissariat Department, as was lately the case when the Soudan force had to indent on Bombay. Without such a reserve the price of fodder rises without any check. I do not believe that exhaustion of grass lands would follow under the management suggested, for the seeding of the aftermath would be sufficient. If not, it would be easy to sow grass seeds. It was also an object to enlist the co-operation of the Forest Department—to whose management the majority of the grass lands of the Presidency is entrusted. The silo was made in one of the forest *kurans*.

146. The action of Government in the Military Department, at the instance of Captain B. L. Reilly, Executive Commissariat Officer, in nominating a representative Committee was, therefore, an important support to the aims which were before me.

147. It is found that the ensilaged grass was in excellent condition. It was very moist, and there was a peculiar smell which stamped it—to use the nomenclature of ensilage—as sour, not sweet silage. Around the edges, to a varying depth of 3 or 4 feet, the stuff had gone bad. This loss is admitted to be inevitable; and the measure of success is not the total absence of loss, but the smallness of the percentage. The top layers were, however, good away from the edges of the pit. A smell was given off, but this is characteristic of sour ensilage, and though unpleasant to man the smell is not disliked by cattle.

148. The colour of the grass was well preserved. Sheaf after sheaf was taken out which could hardly be distinguished from fresh cut green wet grass. To obtain the best results from ensilage it should be used quite fresh. But the distance of the silo from the Commissariat and other animals, which were supplied, induced the officers to dry it. I took out two bundles and dried them carefully under shelter. They very speedily lost all peculiarity of smell, and looked like good well-made hay. At any rate, this grass must, even dried, be superior to dried grass. Drying under cover is only better than drying in the sun, in that the green colour is preserved.

149. The exact percentage of loss cannot be stated. I put 76½ tons of green grass into the pit, and I issued 72 tons of moist ensilage to the Commissariat Department and the battery at Kirkee. Besides this, small quantities were given to various gentlemen who were desirous of trying it. Certainly there must have been less than 4 tons thrown away as bad, even if no allowance is made for shrinkage in the pit. The loss by dryage was by experiment proved to be 60 per cent. Meadow grass in blossom contains about 70 per cent. of water, but when made into hay the product contains only 14 per cent.

150. The Committee individually recorded their opinions on the ensilage—some of them after short experiment with various animals.

The President reported that "on opening the silo, and taking off the matting covering, the outside grass was found of a very dark colour, and had a strong odour; but that only a small portion of the ensilage was of this description—the mass of it in the middle being of a greenish brown colour, and having less odour." After feeding some artillery horses Colonel Warter stated as follows:—

> "I am of opinion that the ensilage should be dried in a shady place before being given to horses. It then loses its strong odour in a great measure, and smells like hay stacked before it is dry. Horses will eat it well when used to it, and it is probably as good as the hay as stacked in this Presidency, but not equal to shrub grass."

Captain Keene, Commanding the Mountain Battery, said:—

> "From the short trial made with the mules of this battery I am of opinion that grass can be preserved by ensilage in a manner to afford good forage for mules, &c. I believe in this particular silo the grass was not quite sufficiently pressed, and I think that the grass was not of the best quality originally." [1]

Captain MacMahon, Depôt Transport Officer, said:—

> "From the six days' trial of the grass taken from the silo I am of opinion that it affords perfectly nutritious forage for ponies, mules, bullocks, and elephants. They undoubtedly prefer it when dry, and when it has lost some of its disagreeable smell. They then eat it very readily. In its wet state they only partake of it in the absence of other food."

Mr. Steel, Inspecting Veterinary Surgeon, examined the grass taken from the silo and

> "found that it had undergone no change calculated to be prejudicial to the health of animals consuming it."

Captain Reilly, Executive Commissariat Officer, issued ensilage mixed with karbi to 50 slaughter cattle and 100 sheep:—

> "The cattle eat the ensilage quite readily, and there appears to be no doubt that this description of food is both wholesome and agreeable to these animals. The sheep did not take to it, at first eating it in small quantities only, and evidently preferring the karbi."

151. The silo had no shed, and the monsoon was near. I therefore asked the Commissariat Department to take over the balance in bulk. Government (Government Resolution No. 2757, Military Department, dated 11th May 1885) accorded sanction:—"All possible support should be given to the Director of Agriculture in this matter of ensilage, and it should be freely used by all Government animals in Poona and Kirkee." The ensilage was, therefore, made over to the Executive Commissariat Officer. The final opinion formed was unfavourable; for in Government Resolution No. 3828 dated 10th July 1885 (Military Department) the conclusion arrived at was—

> "It is the usual practice in this Presidency to cut and stack grass shortly after the termination of the rainy season, and where this can be done there would not appear to be any advantage in making and storing ensilage."

152. I need not say that I cannot subscribe to this conclusion, nor, if I may say so, do I consider it warranted by the facts of this year and the careful reports of the Executive Commissariat Officer last year. It is not a particular but a general condemnation of ensilage, and this, in the face of the great attention paid to the subject in India and out of it, I humbly think to be premature. The only figured statement of results which I have been favoured with, is that

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[1] This is incorrect. The pressure was ample, and the grass of the best quality.

describing a trial with 6 horses—4 on 25 lbs. each of ensilage in lieu of all other fodder, and 2 on 20 lbs. each of the ordinary dried grass supplied by contractors.

The experiment began on the 22nd May, but two of the horses had been fed on ensilage in lieu of grass since the 18th April. The first weighment was made on the 22nd May. Later weighments were taken on the 2nd, 9th and 19th June. The two horses referred to lost during the interval 31 and 42 lbs. respectively. One of the others on ensilage neither gained nor lost a pound. The 4th lost 14 lbs.

As to the 2 horses on dried grass, one lost 8 and the other 28 lbs. Later on (7th July) it was reported that the horses were losing condition. Two had been 81 days and two 49 days on the ensilage.

153. I cannot claim that this experiment was very favourable, but I must draw attention to one fact which appears to me to account for the ill-success. The ensilage was given out in bulk to the Commissariat Department at the end of May. It was kept in a shed in a heap. It was neither dried carefully before distribution, nor was it given fresh from the silo. It was allowed in its moist condition, out of the silo, to go on fermenting and deteriorating. I am not surprized at the result.

154. Before the receipt of the Government Resolution referred to, I had ascertained generally the opinion, unfavourable to ensilage, which the members of the Committee had formed, and I asked Government to appoint a Commission to report on the subject and to advise as regards future action, after taking the opinions of the various officers who had made and witnessed experiments. This was considered unnecessary, and I was directed to report fully, discussing the merits of ensilage, and stating the results of experiments made.

155. In my last year's report and in this section I have, therefore, fully discussed the subject. I have not been able to make another experiment this year, because I found too late that the grass of the Bámbhurda *Kuran*, where the silo is, was already sold; and it was not worth while trying to make arrangements with the purchaser for the grass required.

Moreover, I am greatly disappointed that my attempts so far, though as successful as could have been expected, have completely failed to secure sympathy from the Military authorities.[1]

156. It remains for me to notice the two silos made by Mr. Woodrow.

The murum silo has been opened. The ensilage had during the last two months (before the date of Mr. Woodrow's report) been fed regularly to the farm bullocks. "The cattle get as much as they will eat, and I find this runs about 25 lbs. per head daily. This with the usual ration of 3 lbs. per head of grain has kept them in good condition under hard work. The ensilage has a very strong smell, and the cattle do not appear particularly fond of it."

The black-soil silo has not yet been opened. Mr. Woodrow wishes to see what the stuff will be like after having stood through the whole monsoon succeeding the monsoon in which it was pitted.

157. Silos have been made at the Bhadgaon and Haidarabad Farms and by the Collectors of Ahmadabad, Surat and the Pánch Máháls. They have also been tried elsewhere, but I have not received reports.

Mr. Stormont tried to make sweet silage. The result was not satisfactory; but though the stuff had the appearance of half-rotten hay, the Farm cattle

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[1] Since writing the above I have received the financial statement of the Commissariat Department respecting the ensilage. The cost of ensilage used was Rs. 745. But this saved only Rs. 495 worth of ordinary fodder. The net extra cost was thus Rs. 250. I charged As. 8 per 100 lbs. of moist stuff, equivalent to Rs. 1-4-0 per 100 lbs. of well-dried ensilage, as this was the then ruling price of dry grass in the bázár, and I cannot allow that the dried ensilage was inferior to dried grass. It appears that the Commissariat Department only pay As. 14 per 100 lbs. of dry grass. If I had charged only that rate, the extra cost to the Commissariat would have been Rs. 65 only, and taking into account the value of the ensilage not accounted for in the Rs. 745, the net gain to me would have still been Rs. 150.

Government Resolution No. 5504 (Military Department) dated 21st October 1885.

consumed it to the last leaf. Mr. Stormont with this experience is now making further trials.

Last year at the Haidarabad Farm Mr. Strachan's experiment was a failure, but this year has had much better success. Cattle ate the stuff freely. Mr. Strachan describes the smell as "quite new to him; not very unpleasant, but such as one would not be likely to forget." The silage seems, he says, to stand to green fodder somewhat in the same way that tinned vegetables represent the fresh thing just brought from the garden. I like this simile. No one can argue that ensilage is better than green grass, or that tinned vegetables are better than fresh; but where green vegetable cannot be obtained, the substitute is very acceptable.

The experiments at Ahmadabad and at Godhra (Panch Mahâls) were both first attempts, and were not successful. That at Surat was more successful, for the stuff was readily eaten.

All the experiments made, except that at Bhámburda, were in field silos, *i.e.*, not air-tight and water-tight receptacles which the latest experiments in England and elsewhere demand as the only silos capable of making first-rate ensilage.

158. I do not intend to abandon experiments on ensilage. But I much feel the want of the assistance of an agricultural chemist. Without his aid it is very difficult to prove the superiority of good ensilage over dried grass cut after seeding; and without his aid it is very difficult for me to form a correct opinion myself as to the merits of the system.

METHODS OF PRESERVING FODDER ADOPTED BY THE AGRICULTURISTS.

159. An important enquiry under this head was set on foot by the Government of India. It was especially noticed that the enquiry was not directed in connection with ensilage, but it throws much light on the possibilities of ensilage. I made a full report with a summary of the district reports (*vide* my letter No. 568 dated 19th May 1885). The report will, it is presumed, be reviewed by the Government of India.

The enquiry disclosed the facts:—

First.—That there exists no custom of preserving grass or other fodder on any system resembling that of ensilage.

Secondly.—That hay is not made in Bombay. The grass is either cut green and fed to cattle, or it is left to seed, and is cut when fully matured after the monsoon rains are over.

Thirdly.—That there exists no practice of sowing grass seeds.

Fourthly.—That in many tracts there is great and sometimes chronic deficiency of even dry fodder in the hot season.

## J.—IMPROVED AGRICULTURAL IMPLEMENTS.

160. I have referred to the steam-thresher under the wheat section. A machine used in parts of Gujarát has been brought to my notice by Mr. A'darji Jivanji, a retired Deputy Collector. It consists of a framework resting on 3 parallel rows of toothed wheels, and is used to thresh and cut up the straw of wheat. It is stated that it will with one man and a pair of bullocks thresh as much wheat as 15 pairs of bullocks would tread out. I have had one of the machines made up, and shall try it. Its cost is less than Rs. 50.

161. The manufacturer of the Poona 3-roller sugarcane mill, referred to in para. 70 of my last year's Report, has applied for a patent. The trial of the invention was made at the Poona Show. Two patterns of the Behia Mill were tried—the 2 and the 3-roller mills. The native wooden mill was also worked, in order that the extent of the improvement effected by the iron mills might be gauged. A full report was submitted, which was reviewed in Government Resolution No. 997 dated 2nd February 1885. The Behia Mills showed decided superiority. They are much more portable, much more easily and cheaply set up and worked than the Poona Mill, and extract as large a percentage of the juice as is desirable. The cost of the plant is less. For some time the patentees appeared to me to show reluctance to avail themselves of the favourable results of the comparative trial, but quite lately they have made arrangements to send mills to Bársi, Bhad-

gaon, Kolhápur, Chikodi, and Sátára—*i. e.* to tracts producing fine sugarcane. At the Poona Show Messrs. Massey & Co. of Madras exhibited some of their ploughs which are the result of the long and careful experiments on the defunct Saidápet Farm in the direction of adapting English and other foreign ploughs to the circumstances of the country. The cotton-soil plough has since been used by Mr. Woodrow on the College of Science Farm. "A very useful implement. Thirty acres have been broken up with it, and the ploughman has had the practice necessary to do the plough justice. It is as easy to manage as the native plough. The rear bullocks are not more distressed than the leaders, and the furrow is cut with a level bottom. With 3 pairs of oxen it breaks up a furrow 7″×9″, but the black soil still adheres to the mould board—a defect I hoped to get rid of after ploughing the first 10 acres, but have not yet succeeded. The other varieties of ploughs (Messrs. Massey & Co.'s and Mr. Stormont's new importation) I have not yet had the opportunity of trying at the work they are specially designed for."

Three of Massey's Swedish ploughs were purchased by rayats of the Ahmadnagar District. At Nevása two are regularly used for garden lands, but are considered unsuitable for black soil. The third was bought by a rayat of Puntámba. He does not like it, and cannot use it. I fancy he tried to do too much. I learnt at the Ahmadnagar Show, last year, that he found it difficult to manage; and Mr. Limaye, now Assistant District Inspector, Bijápur, went to show him how to plough. He does not appear to have profited by the instruction.

The Ratnágiri Local Fund Board has not favoured me with any opinion as to the implements purchased at their instance through me (*vide* Report of 1883-84, para. 71).

Mr. Stormont at Bhadgaon has regularly worked the plough made at Ipswich under his supervision, and approves of it.

Mr. Royal, Superintendent of the College of Science Workshop, is pressing his subsoiler and cleaning cultivator on the rayats of the neighbourhood.

An American scythe, with a blade of only 24 inches long and 4 inches broad, was successfully used by Mr. Woodrow to cut bájri. Four men, who had never used a scythe before, cut 2½ acres of green bájri in 11 hours.

Mr. Stormont has been authorized by me to purchase 6 dozen reaping hooks for use at the coming rabi harvest. The native hammered iron sickles are miserable implements, and the substitution of good reaping sickles appears feasible.

Dr. Cooke has just brought out, for the use of the College of Science Farm, several implements for experiment, among which I may name—

1, a bone-crusher,
2, a winnower,
3, a small threshing machine,
4, an improved chaff-cutter,
5, a cultivator,

all workable by bullock power.

162. I must complete this sketch with the notice of a fact which caused me regret. I found in Gadag (Dhárwár District) a very large unwieldy iron plough which a rayat was induced to purchase at Bellári for Rs. 75. It looks to me like one of the musters brought out to this country for adaptation. It was purchased from Mr. Sabapatti Mudliár, who has shown much energy in introducing improved ploughs, but I cannot understand how this gentleman could have recommended the unmodified old-fashioned European implement.

### K.—The value of Ja'mbul (*Eugenia Jambolana*) in ridding tanks and wells of moss.

163. The unhealthiness of the densely wooded ghát tracts of the Kánara District is to some extent due to the badness of the water. One cause of pollution is the prevalence of a variety of moss. In 1883-84 an epidemic of fever of a severe type at Haliyál was attributed to the presence of moss in the drinking tanks. It is frequently cleared out by the Municipality, but always re-appears.

An observant officer, Mr. Krishnáji Ballál Deval, now Mámlatdár of Kumta, ascertained by enquiry that one of the tanks at Haliyál was twenty years ago surrounded by jámbul trees. These were cleared off to prevent the leaves and branches from falling into the tank. Old people said that the water used to be clear when there were jámbul trees. Mr. Deval further noticed a custom of placing jámbul planks or beams low down in the water in the side walls of wells to keep the water clear. With these hints, on his transfer to the Kumta táluka he made enquiry, and found that the people believed that jámbul logs possessed the property of keeping wells and tanks from moss. Accordingly he selected a new Local-Fund tank at the village of Bankikodla, which was full of moss, and placed several logs of jámbul in it. In two months the water was quite clear, and the moss had disappeared.

He next chose a large tank at Gokarn full of moss, so that the pilgrims found it difficult to bathe in it. Two hundred logs of jámbul were put into the tank, and the moss disappeared wherever there was a log. I have requested the Collector to direct the Mámlatdárs to make further experiment, and suggested that Mr. Deval should fill two large earthenware vessels with water and moss taken carefully from an infested tank, and that he should put some jámbul wood in one vessel, and not in the other, and watch the result.

I have asked for a specimen of the moss.

## VI.—CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

164. I have not been able to make much progress in describing the various breeds of cattle. I have from time to time made notes on the various breeds that have come under my observation, and worked up the reports received from the District officers. But the information compiled up to date will not permit me to hazard yet any attempt at a full account of the breeds, and their merits and demerits.

Government Resolution No. 1066, dated 4th February 1885.

165. The subject of improving the breed of sheep has been taken up by the Commissariat Department. One recommendation was that improvement by crossing the Sind Dumba with the Deccan sheep should be sought. This cross has already been made successfully at the Bhadgaon Farm (*vide* para. 45 above). The plan of extending the improvement by giving rams of the new cross breed to shepherds in exchange for good ewes has not succeeded. The Commissary General laid much stress on the improvement of the breed of the meat-producing animals in not only the Deccan, but throughout the Presidency, because—

(1). The meat produced now is very inferior.

(2). The meat-eating population of India is increasing.

(3). The duties of an Executive Commissariat Officer in regard to the meat supply are yearly becoming more and more anxious.

He suggested as remedial measures—

(1). Strict attention as to the breed on the part of the owners.

(2). A rigid avoidance of the commingling of diseased animals with those in sound bodily condition.

(3). Better fodder, water, and as much green or ensilage fodder in the hot season as possible.

(4). A plentiful supply of salt at all times.

(5). Clean healthy pasturage.

(6). Interested attendants.

166. These principles are, no doubt, sound and indisputable, but it may be stated that the aim of the Commissariat Department is to improve beef, that of the Agricultural Department to improve the working power of the animal, and what is of primary importance in the one case is of secondary consideration in the other. For growing beef strict attention to breed is not advisable. Crosses are generally better beef-producers than pure-bred animals. Moreover, beef has never been the aim of native breeders, and none, therefore, of the pure breeds of this country are likely to give good results. Rather would I throw out a suggestion, that strict attention to crossing—say, English bulls with the country

cows—is required. The other principles above laid down are well known to the rayats in the abstract, and they try as much as possible to harmonize the practice with the theory. The violation of the principles is traceable to circumstances beyond their control, rather than to ignorance. The gradual success in ensilage will, it is hoped, provide a substitute for green fodder in the hot weather and early monsoon, which is a great desideratum almost everywhere; and the recent orders of Government will secure clean and healthy pasturage. It is hoped that some means in the interest of live stock may be discovered by which salt may be made palatable to cattle and at the same time unpalatable to man. If this discovery is made, Government will be able to make liberal concessions to rayats needing salt for their cattle, which in the interest of salt revenue cannot be asked for just now.

Resolution No. 7467, dated 15th September 1885.

167. Owing to financial pressure the establishment of the Veterinary Hospital as an appendage to the College of Science in Poona and of the Veterinary College and Hospital in Bombay have not made further progress. To encourage the work of these hospitals the establishment of Cattle-disease Inspectors on the Madras plan would be invaluable. There are many simple remedies for certain diseases which are unknown to the people. Foot-and-mouth disease, for instance, is easily cured, and its contagion easily prevented. If the Inspectors are properly taught and utilized, they will in some degree prevent the heavy losses sustained yearly by the people, and incidentally the improvement in breeding and management of cattle and sheep will receive care and will make a beginning. The only law at present in force in any part of India for the prevention of cattle-disease is Madras Act II. of 1866, and it is under contemplation whether similar legislative enactment cannot with advantage be introduced into the other parts of India.

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

168. The steps taken to revise the Forms of Agricultural Statistics are noticed above (paras. 19 and 20). The statistical returns required by the Government of India for submission to the Secretary of State will be compiled and forwarded as soon as the information is received from the District officers.

### *Rainfall Statistics.*

169. The subject of recording correct and useful statistics relating to rainfall has been taken in hand. The figures given in Annual Reports and in Government Gazettes are not satisfactory and sufficient for purposes of correct analyses and deductions. As regards the character of the rainfall record it is not, as stated in my letter No. 962 dated 17th July 1885, sufficient to know what the weekly, monthly, or yearly total is. Information regarding the number of rainy days and of rainless days, heavy falls and their effects, and as to whether the rainfall was timely and sufficient, should be collected and compiled on an uniform system. I will illustrate this by quoting the evidence before the Famine Commission given by the Collector of Kaládgi :—

"The actual amount gauged is scarcely a criterion, because a heavy fall of a few hours may gauge much, but be of little good if it ceases entirely, whereas a gentle but continuous rain which does not gauge much may be most beneficial. For instance, the rainfall in June 1876 (6 inches 83 cents) is the highest recorded in the ten years preceding 1876, but yet that was the great year of famine. The rain in September 1877 (12 inches 3 cents) did infinite damage from its heaviness, whereas I cannot learn that that of September 1874 (22 inches 6 cents) did. Again, the fall of 1876 (13 inches 40 cents) resulted in severe famine, whereas the fall of 1871 (13 inches 92 cents) did not cause any bad effects."

Information and evidence collected to answer the questions issued by the Famine Commission, 1878, page 12.

170. I cannot lay too much stress on the necessity that exists for me to keep such a record of the rainfall as will show not only the amount in each district, but its effect. The evidence summarized by the Honorable Mr. Peile for the Famine Commission proves, if evidence is required to prove the point, that the effect of rain and weather at different times on different crops can only be ascertained by a close study of the rainfall at the several stages of the growth of various crops.

171. The Irrigation Department receives weekly returns from 230 gauges. The Chief Engineer has undertaken to place these at my disposal. Though ap-

parently numerous, the returns are incomplete, because none are received from some sub-divisions of districts. I have made an analysis of the rain of 1884 with the object of exhibiting the facts in a form which will be useful for reference, and more correctly indicating the features of the season, than the customary averages for whole districts now recorded in the Administration Reports.

172. I have for the purposes of this record divided the districts into the more and the less protected. The protected districts are those which have a regular rainfall, and are generally not liable to famine. These include the Gujarát and Konkan Collectorates with Kánara. The unprotected districts are those of the Deccan and Bombay Karnátak (excluding Kánara). These have a more or less irregular and scanty rainfall, and are consequently often liable to serious failures of crops.

173. In this report I have found it possible to make the digest of the rainfall only for the unprotected districts, but I have applied to Government for assistance in securing special returns for the tracts not covered by the reports submitted to the Irrigation Department, and propose in the report next year to include protected districts also.

174. Below the figures for each district I have added a few explanatory and descriptive notes. These will become more valuable as agricultural enquiry extends, and will be designed especially to show the effect of the arrival or absence of rain at particular seasons on particular staples.

175. The record will be a permanent one, and will, I believe, be an important guide to District officers when signs of distress appear. For from the facts of former years, well digested, it cannot be denied that the features of a new year, as they disclose themselves, can to some extent be correctly judged. If in any degree this record is valuable as a warning of future distress, or if it is of assistance in determining the extent of probable distress, my object will be secured.

176. It is possible that the analysis may more conveniently be thrown into the form of a chart or diagram, and to this point I will give attention.

177. With the aid of the Circle Inspectors, as will be noticed directly I have collected a number of current maxims on the rainfall of Dhárwár. I propose to comment on the rainfall of that district by the light of these proverbs, and it will be a further point for consideration whether the divisions of the rainy season customary among the people should not be adopted in my analyses as the principal divisions, rather than the English months.

178. As regards the rainfall of 1885 I intend to work up the analyses as early as possible with the descriptive notes, and to submit them to the District officers for scrutiny and criticism, so that when they appear in their final form in my report next year they will be deserving of full reliance as a correct statement of the facts of the season.

179. Before giving the tables I would describe the action I have taken with regard to proverbs on agricultural subjects. These are to a very large extent descriptive of the rainfall. I offered a prize to the Dhárwár Circle Inspectors for the best collection. The Agricultural Departments are under a strong injunction from the Supreme Government to make agricultural enquiry the primary object of their attention. The people have no text-book to guide them in their cultivation. Their practice is ruled by empirical knowledge supplemented and aided by the maxims which have been taught for generations by father to son. These contain the summed up experience of generations, and are one of the most fruitful subjects for study. They have a wide range. They deal with the effect of the rain at various seasons, the right time for sowing various crops, the relative qualities of various soils, and like matters, and they urge the necessity of good and careful cultivation.

180. I shall arrange the proverbs after a time in the form of a pamphlet with explanatory notes. I shall collect more in the Bijápur District, where the Inspector Staff has now been organized. These collections will in time be useful in preparing text-books on agriculture which are much needed, but which cannot yet be attempted. In an Appendix I give a few specimens.

## VIII.—TRADE AND TRADE STATISTICS.

181. Except in the review made on the Rail-Borne and Road Traffic Report for 1884-85 the subject has not been taken up. The scheme of registering land traffic originated with the Secretary of State for India in 1874, who, in a subsequent despatch (No. 106 of 30th May 1878), laid stress on the collection and compilation of statistics of trade with foreign countries and Native States and along the chief routes, as the best means "of determining questions of great moment to the welfare of the people, such as the necessity of a line of railway, or the probable effect which the imposition or removal of a tax may have upon the trade." It was not found possible to meet the wishes of the Supreme Government till 1879, when on the report of a Committee—consisting of the Commissioners N. D. and C. D., the Commissioner of Customs, the Collector of Poona and the Collector of Salt Revenue—the Bombay Government decided that the Commissioner of Customs should undertake the duty of registering traffic passing across the external frontier of the Presidency, and that the Examiner of Guaranteed Railway Accounts should supervise the preparation of the returns of the Rail-borne Traffic. In 1881 the Commissioner of Customs issued the first report on the Rail-borne and Road Traffic under the orders of 1879. In 1883 the Government of India (letter No. 167 dated 27th September 1883) inquired whether "the supervision of traffic registration is one of the duties assigned to the Director of Agriculture." The Bombay Government answered in the negative (Government Resolution No. 8976 dated 6th December 1883), and stated that "the duty should not be imposed on the Director, whose attention is at present directed to many other matters falling within his province." The system introduced in 1881 continued in force until 1884, when the work of preparing reports and returns relating to Rail-borne and Land Traffic was for convenience transferred to the Examiner of Guaranteed Railway Accounts.

182. Most of the Collectors and Political Officers recommended the discontinuance of the registration of road traffic on the ground that it is carried on in an imperfect and untrustworthy manner (Government Resolution No. 9158 dated 18th November 1884), whereupon the Commissioner of Customs and the Director of Agriculture were asked to submit a scheme for the remodelling of the present registration posts on the plan adopted in the North-West Provinces, and to consider the expediency of transferring the supervision of the registration establishments to the Director of Agriculture. A joint report was submitted by the Examiner of Guaranteed Railway Accounts and the Director of Agriculture. They recommended—

(1.) That no change is advisable at present as regards the compilation or publication of either road or rail-borne trade statistics.

(2.) That when the Inspecting Staff of the Agricultural Department has been extended to all districts, the Director should be entrusted with the supervision and also the compilation of road trade statistics.

(3.) That meanwhile the registration clerks should be discharged, or else as far as possible collected into one division, to be there trained and formed into a movable staff as recommended by the Calcutta Conference.

(4.) That the question of transferring the compilation of the rail-borne traffic to the Agricultural Department should be indefinitely postponed, the returns and reports being, however, submitted through the Director of Agriculture, to give that officer an opportunity of commenting thereon.

183. These proposals, except No. 3, were approved (Government Resolution No. 2220, dated 16th March 1885). As regards the recommendation No. 3, Government decided that the existing arrangement on the subject of the registration of road traffic should not be disturbed. Under Government Resolution No. 2220 the report for 1884-85 was for the first time reviewed by me.

184. The chief features of the trade may be briefly noticed as follows :—

The total rail-borne trade of the Presidency, exclusive of Sind, amounted in 1884-85 to about 63 million maunds, of which more than half represents the trade of the Presidency with other provinces and the rest the internal trade. The Central Provinces, Berár, Central India and Rajputána, the Panjáb, North-

West Provinces and Oudh and Haidarabad are the provinces which supply this Presidency with their surplus produce, partly for the use of this Presidency, but mainly for the use of foreign markets. In return for this, this Presidency sends its own surplus produce, and distributes the produce it receives from foreign countries. The following statement shows the chief imports into, and exports from, the Bombay Presidency :—

| Imports into Bombay Presidency from Sind and the rest of India. | Maunds. | Exports from Bombay Presidency to Sind and the rest of India. | Maunds. |
|---|---|---|---|
| Cotton (raw) ... | 1,774,502 | Cotton piece-goods (European)... | 477,420 |
| Wheat ... ... | 11,807,779 | Ditto (Indian)... | 163,479 |
| Oil-seeds ... ... | 8,563,808 | Coal ... ... ... | 336,826 |
| Wool (raw) ... ... | 51,651 | Metals ... ... | 754,487 |
| Myrabolams ... ... | 238,083 | Sugar ... ... | 419,079 |
| Opium ... ... | 77,721 | Tobacco ... .. | 192,369 |
| Other food-grains ... | 3,164,376 | Salt ... ... ... | 2,455,043 |
| Provisions (ghee) ... | 92,066 | Kerosine oil ... | 175,122 |
| | | Jute and gunny bags. | 292,517 |

Of the imports intended for shipment to foreign countries the bulk of cotton is received from Berár; wheat from the Central Provinces, Panjáb and the North-West Provinces; oil-seeds and myrabolams from the Central Provinces; and opium and wool from Rajputána and Central India. Of the exports the bulk of coal and jute and gunny bags is sent to the Central Provinces; cotton piece-goods, metals (iron) to the Panjáb, Rajputána and Central India and the Central Provinces; salt, sugar and tobacco to Rajputána and the Central Provinces; and kerosine oil to Berár and the Central Provinces.

Of the 27 million maunds representing the internal trade the chief items are coal largely exported from Bombay for the use of up-country mills and factories and railway workshops; cotton (raw) imported into Bombay chiefly from Gujarát and Káthiáwár; wheat and oil-seeds imported into Bombay, mostly from Khándesh, Násik, Ahmadnagar and from Gujarát and Káthiáwár; and tobacco from Gujarát and Káthiáwár.

The total road-borne trade of the Presidency amounted to 37¾ lákhs maunds, of which 29¾ lákhs were imports and 8 lákhs were exports. Sholápur is the great outlet and inlet through which much of this trade passes to the Nizám's Dominions in the interior.

185. The total cost on account of trade registration amounted in 1884-85 to Rs. 14,826. I have submitted for the consideration of Government the question as to whether the annual expenditure of Rs. 10,000 on account of road traffic should not be discontinued, especially because the statistics compiled by untrained and unsupervised clerks are admittedly untrustworthy (*vide* para. 21 of the Review).

I have the honour to be,

Sir,

Your most obedient Servant,

E. C. OZANNE,

Director of Agriculture.

# RAINFALL RETURNS

*(Referred to in para. 171).*

## *Khándesh District Rainfall of 1884.*

| Táluka= | Dhulia, 2 Gauges. | | Páchora, 5 Gauges. | | Chálisgaòn, 2 Gauges. | | Pimpalner, 4 Gauges. | | Sávda, 1 Gauge. | | Bhusával, 3 Gauges. | | Nasirábád, 6 Gauges. | | Jámner, 2 Gauges. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | |
| January ... ... ... ... | 0·59 | 1 | 0·07 | ... | 0·25 | 1 | 0·30 | 1 | ... | ... | 0·30 | 1 | 0·28 | 1 | 0·24 | 1 | Records available for 8 out of 16 tálukás, and these are, except Pimpalner, the chief cotton tracts. The extensive wheat tracts of the Tápti valley are unrepresented. In the north and west or Dáng tracts of the Sátpudás and Sahyádris the fall is heavy and sure. These tracts are also not represented, except Pimpalner. The fall of the cotton and wheat tracts is uncertain. |
| February... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| March ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| April ... ... ... ... | ... | ... | 0·02 | ... | ... | ... | 0·08 | 1 | ... | ... | 0·05 | ... | 0·01 | ... | ... | ... | |
| May ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| June, 1st half ... ... ... | 0·12 | 1 | 2·19 | 2 | 0·51 | 3 | 0·55 | 2 | 0·65 | 1 | 3·52 | 2 | 2·11 | 2 | 1·40 | 2 | |
| Do. 2nd do. ... ... ... | 3·53 | 3 | 3·16 | 4 | 3·39 | 4 | 4·03 | 4 | 1·53 | 2 | 0·65 | 3 | 1·23 | 4 | 1·63 | 4 | |
| July, 1st half ... ... ... | 7·10 | 5 | 5·95 | 5 | 8·15 | 6 | 4·58 | 4 | 10·13 | 9 | 4·40 | 7 | 5·51 | 5 | 5·09 | 5 | |
| Do. 2nd do. ... ... ... | 4·53 | 10 | 4·34 | 9 | 5·84 | 10 | 8·16 | 12 | 5·77 | 14 | 4·05 | 11 | 5·21 | 13 | 3·63 | 10 | |
| August, 1st half... ... ... | 0·05 | 1 | 0·18 | 1 | 0·40 | 2 | 1·39 | 7 | 0.42 | 3 | 0·52 | 1 | 0·59 | 4 | 0·82 | 5 | |
| Do. 2nd do. ... ... | 2·41 | 7 | 2·90 | 7 | 5·13 | 7 | 2·54 | 9 | 5·25 | 8 | 3·26 | 6 | 3·50 | 7 | 5·50 | 8 | |
| September, 1st half ... ... | 4·07 | 5 | 4·56 | 5 | 6·97 | 6 | 6·10 | 7 | 6·00 | 3 | 5·64 | 4 | 4·26 | 6 | 3·95 | 4 | |
| Do. 2nd do. ... ... | 7·55 | 10 | 8·13 | 10 | 9·46 | 11 | 4·85 | 8 | 10·79 | 13 | 8·83 | 11 | 9·71 | 11 | 10·14 | 10 | |
| October, 1st half ... ... | 0·52 | 2 | 0·09 | 1 | 0·36 | 2 | 0·92 | 3 | ... | ... | 0·41 | 1 | 0·29 | 1 | 0·25 | 2 | |
| Do. 2nd do. ... ... | 1·52 | 3 | 0·69 | 2 | 0·69 | 2 | 1·28 | 3 | 0·20 | 2 | 0·54 | 2 | 0·55 | 3 | 0·16 | 1 | |
| November ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| December ... ... ... | 1·45 | 2 | 1·75 | 3 | 1·36 | 3 | 2·80 | 4 | 1·60 | 3 | 2·83 | 3 | 2·65 | 4 | 1·82 | 2 | |
| Total ... | 33·44 | 50 | 34·03 | 49 | 42·51 | 57 | 37·58 | 65 | 42·34 | 58 | 35·00 | 52 | 35·90 | 61 | 34·63 | 54 | |
| Approximate average ... ... | 23·16 | ... | 28·99 | ... | 24·59 | ... | 25·41 | ... | 23·41 | ... | 26·11 | ... | 30·72 | ... | 29·35 | ... | |

The fall of the year was abnormally large, though less than in the year previous. It was late and scant at the commencement, causing considerable decrease in the area of cotton, the staple of the district. Cotton suffered greatly from heavy rain in September, October and December, especially the late sown cotton from the December fall. Jowári (an early crop here), however, secured very favourable rain, and was far better than bájri, which was injured by rain at harvest. The rabi rain was very heavy, and delayed sowing. The July rain was injuriously heavy. The December rain was harmful to all crops. On the whole, however, the rabi season was good. Oil-seeds (especially linseed) are extensively grown, and linseed yielded well.

## *Násik District Rainfall of 1884.*

| Táluka = | Násik, 4 Gauges. | | Sinnar, 3 Gauges. | | Igatpuri, 2 Gauges. | | Dindori, 6 Gauges. | | Niphád, 6 Gauges. | | Chándor, 2 Gauges. | | Yeola, 1 Gauge. | | Peint, 1 Gauge. | | Málegaon, 3 Gauges. | | Kalvan, 1 Gauge. | | Nándgaon, 5 Gauges. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | Ins. | | |
| January ... ... ... | 0·07 | ... | 0·15 | ... | 0·15 | 1 | 0·12 | 1 | 0·12 | 1 | 0·70 | 2 | 0·26 | 1 | 0·73 | 2 | 0·55 | 1 | 0·91 | 1 | 0·33 | 1 | No record available for Báglán táluka. The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs. |
| February ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| March ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| April ... ... ... | 0·10 | 1 | 0·11 | 1 | ... | ... | 0·10 | 1 | 0·09 | 1 | 0·04 | ... | ... | ... | ... | ... | 0·32 | 1 | ... | ... | ... | ... | |
| May... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | . | ... | 0·03 | 1 | ... | ... | ... | ... | |
| June, 1st half ... ... | 0·20 | 1 | 0·91 | 2 | 1·52 | 2 | 1·20 | 2 | 1·27 | 3 | 0·50 | 2 | 0·83 | 1 | 0·61 | 3 | 0·41 | 3 | 4·16 | 4 | 0·59 | 2 | |
| Do. 2nd do. ... ... | 2·28 | 7 | 1·46 | 4 | 11·60 | 12 | 3·78 | 8 | 1·46 | 4 | 2·56 | 5 | 0·85 | 3 | 7·36 | 11 | 3·38 | 4 | 1·39 | 4 | 1·30 | 3 | |
| July, 1st half ... ... | 3·74 | 9 | 2·99 | 5 | 16·16 | 14 | 5·39 | 13 | 3·21 | 6 | 4·03 | 5 | 2·66 | 4 | 8·00 | 15 | 5·95 | 6 | 3·14 | 6 | 3·71 | 4 | |
| Do. 2nd do. ... ... | 17·44 | 16 | 9·62 | 14 | 45·97 | 16 | 20·76 | 15 | 6·45 | 13 | 4·07 | 16 | 3·39 | 13 | 32·98 | 16 | 2·45 | 12 | 7·19 | 15 | 2·91 | 12 | |
| August, 1st half ... .. | 1·47 | 8 | 1·07 | 10 | 9·06 | 15 | 2·66 | 13 | 0·48 | 4 | 0·38 | 3 | 0·29 | 4 | 5·67 | 15 | 0·07 | 3 | 0·53 | 8 | 0·18 | 3 | |
| Do. 2nd do. ... ... | 1·98 | 11 | 2·75 | 12 | 14·86 | 16 | 7·73 | 14 | 4·11 | 11 | 2·74 | 10 | 2·07 | 9 | 9·83 | 15 | 2·81 | 9 | 4·48 | 12 | 2·47 | 7 | |
| September, 1st half ... | 2·73 | 9 | 2·73 | 12 | 13·33 | 15 | 8·30 | 14 | 2·30 | 8 | 2·65 | 7 | 1·87 | 7 | 11·64 | 15 | 3·47 | 7 | 2·51 | 11 | 3·21 | 6 | |
| Do. 2nd do. ... | 3·32 | 9 | 3·12 | 11 | 14·77 | 13 | 6·90 | 13 | 2·75 | 6 | 4·72 | 11 | 2·01 | 9 | 11·13 | 15 | 9·80 | 11 | 3·73 | 12 | 7·42 | 11 | |
| October, 1st half ... ... | 3·42 | 3 | 1·20 | 4 | 3·08 | 6 | 2·38 | 7 | 1·64 | 3 | 0·65 | 3 | 0·20 | 3 | 1·01 | 6 | ·85 | 4 | 4·44 | 2 | 0·42 | 3 | |
| Do. 2nd do. ... ... | 2·58 | 5 | 4·98 | 5 | 3·12 | 5 | 1·50 | 5 | 2·68 | 4 | 2·63 | 4 | 1·12 | 4 | 2·54 | 5 | 2·67 | 5 | 1·74 | 4 | 1·32 | 3 | |
| November ... ... ... | 0·04 | ... | 0·04 | 1 | 0·01 | ... | 0·01 | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·03 | .. | |
| December ... ... ... | 1·09 | 3 | 0·75 | 2 | 1·39 | 3 | 0·60 | 1 | 1·97 | 3 | 2·32 | 3 | 4·18 | 7 | 1·04 | 2 | 3·21 | 4 | ... | ... | 1·03 | 2 | |
| Total ... | 40·46 | 82 | 31·88 | 83 | 135·02 | 118 | 61·43 | 107 | 28·53 | 67 | 28·49 | 71 | 19·73 | 65 | 92·54 | 120 | 35·97 | 71 | 34·22 | 79 | 24·92 | 57 | |
| Approximate average ... | 27 | ... | 21 | ... | 114 | ... | 26 | ... | 18 | ... | 28 | ... | 22 | ... | 93 | ... | 23 | ... | 32 | ... | 21 | ... | |

Monsoon broke well in third week of June—rather late, and the fall was not sufficient for general sowings till the middle of July. The deficiency of early rain was detrimental to the rice and hill crops of the Dángs as well as to the kharif crops of the Desh. The kharif further suffered from short rain in August. The September rain was good for the rabi sowings, and still more so the October rain; but this was damaging to the kharif crops, especially cotton. The abnormal rain of December no doubt increased the yield of the wheat and other rabi crops where it was not too heavy, but it caused rust and deterioration in quality to wheat. On the whole cotton suffered most.

*Ahmadnagar District Rainfall of 1884.*

| Táluka = | Nagar, 3 Gauges. | | Sangamner, 3 Gauges. | | Jámkhed, 1 Gauge. | | Párner, 1 Gauge. | | Kopargaon, 1 Gauge. | | Ráhuri, 1 Gauge. | | Nevása, 7 Gauges. | | Shevgaon, 1 Gauge. | | Karjat, 1 Gauge. | | Shrigonda, 1 Gauge. | | Akola, 2 Gauges. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | |
| January ... ... ... | 0·20 | 1 | 0·53 | 2 | 0·17 | 1 | 0·29 | 2 | 0·40 | 1 | 0·30 | 1 | 0·40 | 2 | 0·31 | 2 | ... | ... | 0·24 | 1 | 0·11 | 1 |
| February ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... |
| March ... ... ... | ... | ... | 0·24 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | .. | ... | ... | ... | ... | ... |
| April ... ... ... | 0·58 | 2 | 0·14 | 1 | 0·24 | 1 | 0·22 | 1 | ... | ... | ... | ... | 0·25 | 1 | 0·17 | 3 | ... | ... | 0·55 | 1 | 0·05 | ... |
| May ... ... ... | ... | .. | 0·06 | ... | 0·16 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 0·20 | 1 | ... | ... | ... | ... | ... | ... |
| June, 1st half ... ... | 0·08 | 1 | 0·37 | 1 | 0·92 | 2 | 0·22 | 2 | 0·40 | 2 | 0·30 | 1 | 0·94 | 3 | 0·48 | 2 | 1·79 | 2 | 0·98 | 2 | 0·47 | 3 |
| Do. 2nd do. ... ... | 0·92 | 3 | 2·10 | 5 | 0·77 | 5 | 2·34 | 3 | 1·30 | 3 | 1·48 | 3 | 1·31 | 5 | 1·44 | 6 | 0·33 | 2 | 0·74 | 3 | 6·83 | 11 |
| July, 1st half ... ... | 0·87 | 2 | 1·01 | 4 | 2·79 | 5 | 2·47 | 7 | 1·57 | 3 | 0·68 | 3 | 0·67 | 5 | 0·96 | 9 | 1·18 | 3 | 0·93 | 5 | 9·02 | 12 |
| Do. 2nd do. ... ... | 0·87 | 6 | 3·70 | 9 | 1·72 | 5 | 2·76 | 11 | 2·98 | 7 | 2·04 | 8 | 1·05 | 7 | 1·17 | 10 | 1·64 | 7 | 1·77 | 8 | 33·82 | 15 |
| August, 1st half ... ... | 0·16 | 1 | 0·18 | 2 | 0·90 | 5 | 0·34 | 7 | 0·01 | 1 | .. | ... | 0·23 | 4 | 0·47 | 6 | ... | ... | 0·22 | 2 | 7·59 | 9 |
| Do. 2nd do. ... .. | 4·36 | 5 | 2·63 | 4 | 4·75 | 7 | 3·53 | 8 | 2·00 | 5 | 5·92 | 3 | 4·63 | 7 | 1·87 | 5 | 2·87 | 8 | 2·44 | 5 | 9·76 | 13 |
| September, 1st half ... | 0·60 | 4 | 1·19 | 4 | 0·86 | 4 | 1·05 | 8 | 1·56 | 6 | 0·75 | 4 | 0·79 | 4 | 0·53 | 5 | 0·26 | 2 | ... | ... | 13·10 | 12 |
| Do. 2nd do. ... | 5·73 | 8 | 3·45 | 8 | 5·35 | 7 | 2·06 | 7 | 2·90 | 8 | 3·21 | 7 | 3·83 | 10 | 2·54 | 12 | 2·24 | 7 | 1·72 | 7 | 6·50 | 11 |
| October, 1st half ... ... | 1·43 | 3 | 1·62 | 2 | 0·33 | 1 | 1·22 | 4 | 1·35 | 2 | 1·07 | 2 | 0·75 | 2 | 2·30 | 4 | 0·26 | 3 | 0·29 | 4 | 2·57 | 4 |
| Do. 2nd do. ... ... | 2 98 | 4 | 3·36 | 5 | 1·97 | 2 | 1·70 | 7 | 1·44 | 3 | 4·56 | 5 | 1·99 | 4 | 2·24 | 5 | 1·45 | 4 | 1·48 | 6 | 2·89 | 6 |
| November... .. ... | ... | ... | 0·06 | 0 | 0·14 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | 0·22 | 1 |
| December ... ... ... | 2·85 | 7 | 2·76 | 5 | 1·64 | 4 | 1·77 | 4 | 3·92 | 5 | 3·66 | 5 | 4·63 | 7 | 3·45 | 7 | 2·10 | 3 | 3·74 | 7 | 1·01 | 2 |
| Total ... | 21·63 | 47 | 23·40 | 53 | 22·71 | 51 | 19·97 | 71 | 19·83 | 46 | 23·97 | 42 | 21·47 | 61 | 18·13 | 77 | 14·12 | 41 | 15·10 | 51 | 93·94 | 100 |
| Approximate average... | 23 | ... | 17 | ... | 26 | ... | 21 | ... | 18 | ... | 26 | ... | 21 | ... | 23 | ... | 20 | ... | 20 | .. | 21 | ... |

**Remarks.**

(1) *Desh*—
Godávari Valley (tálukás 5 to 8). Rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor Valley (tálukás 9 and 10) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukás 1 to 4 lie between these valleys. Alternation of bare hill and treeless plain, with occasional fertile well-wooded tracts. Rain more regular.

(2) *Dángs*—
Half Akola has very heavy rain. Half abuts on the Desh. The record shows the mean fall fairly. It exceeds the average, which is based on returns from the plain portion.

Early monsoon rain scanty and late, specially in Nos. 1-3, 6, 7, 8, where sowings were delayed till the end of July. The early August rain was poor everywhere, and the kharif crops languished. The late August rain revived them, and averted an imminent fodder famine. In September another damaging break was followed by general and good rain, which benefited the kharif and served for timely and general rabi sowing. October rain good. The fall in December, abnormal though it was, increased the rabi yield, though it caused rust to wheat and deterioration of quality.

## *Poona District Rainfall of 1884.*

| Táluka= | Haveli, 7 Gauges. | | Khed, 2 Gauges. | | Purandhar, 2 Gauges. | | Bhimthadi, 10 Gauges. | | Junnar, 1 Gauge. | | Sirur, 1 Gauge. | | Mával, 3 Gauges. | | Indápur, 5 Gauges. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | |
| January ... ... ... | 0·14 | 1 | 0·26 | 1 | 0·14 | 1 | 0·23 | 1 | 0·49 | 2 | 0·29 | 2 | 0·08 | 1 | 0·05 | 1 | The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukás are uncertain and irregular like the adjoining tálukás of Sholápur. |
| February ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| March ... ... ... | 0·16 | 1 | ... | ... | ... | ... | 0·05 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | |
| April ... ... ... | 0·22 | 1 | 0·19 | 1 | 0·46 | 2 | 0·16 | 1 | 0·70 | 1 | 0·06 | 1 | 0·44 | 1 | 0·15 | 1 | |
| May... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| June, 1st half ... ... | 0·36 | 2 | 1·05 | 2 | 0·12 | 1 | 0·97 | 2 | 0·21 | 1 | 0·52 | 2 | 0·82 | 3 | 0·93 | 1 | |
| Do. 2nd do. ... ... | 1·95 | 7 | 2·11 | 9 | 0·72 | 4 | 1·31 | 4 | 1·23 | 8 | 1·06 | 5 | 5·25 | 8 | 0·67 | 2 | |
| July, 1st half ... ... | 2·71 | 9 | 3·19 | 11 | 1·62 | 7 | 1·40 | 5 | 3·75 | 12 | 0·85 | 3 | 8·82 | 11 | 0·84 | 6 | |
| Do. 2nd do. ... ... | 11·60 | 14 | 8·22 | 14 | 5·11 | 11 | 4·10 | 11 | 9·41 | 16 | 2·07 | 9 | 23·12 | 14 | 1·80 | 9 | |
| August, 1st half ... ... | 1·32 | 8 | 1·55 | 11 | 0·25 | 5 | 0·74 | 3 | 2·14 | 13 | 0·06 | 1 | 4·73 | 9 | 0·08 | 2 | |
| Do. 2nd do. ... ... | 3·25 | 11 | 2·61 | 12 | 1·97 | 7 | 2·22 | 6 | 2·34 | 14 | 3·28 | 3 | 9·60 | 11 | 1·39 | 5 | |
| September, 1st half ... | 2·22 | 9 | 2·09 | 11 | 0·43 | 5 | 1·09 | 3 | 1·96 | 11 | 0·11 | 1 | 8·81 | 9 | 0·46 | 2 | |
| Do. 2nd do. ... | 2·87 | 10 | 2·92 | 8 | 1·39 | 6 | 1·91 | 7 | 3·26 | 9 | 3·80 | 8 | 10·00 | 9 | 1·54 | 5 | |
| October, 1st half ... ... | 1·63 | 3 | 2·85 | 4 | 2·12 | 3 | 1·14 | 3 | 5·01 | 3 | 0·61 | 2 | 2·75 | 3 | 0·55 | 2 | |
| Do. 2nd do. ... ... | 6·71 | 6 | 2·54 | 6 | 7·72 | 6 | 6·72 | 5 | 3·23 | 6 | 1·91 | 7 | 2·51 | 4 | 3·74 | 4 | |
| November .. ... ... | 0·16 | 1 | 0·94 | 2 | 0·19 | 1 | ... | ... | 0·89 | 1 | ... | ... | ... | .. | ... | ... | |
| December ... ... ... | 1·51 | 5 | 1·51 | 4 | 0·68 | 2 | 2·01 | 4 | 3·14 | 6 | 1·34 | 5 | 1·36 | 3 | 1·34 | 2 | |
| Total .. | 36·81 | 88 | 32·03 | 96 | 22·92 | 61 | 24·05 | 56 | 37·76 | 103 | 15·96 | 49 | 78·29 | 86 | 13·54 | 42 | |
| Approximate average ... | 28 | ... | 23 | ... | 21 | ... | 16 | ... | 22 | ... | 18 | ... | 60 | ... | 17 | ... | |

On the whole the rainfall was seasonable for the kharif in the west and central belts, but late and deficient in the eastern tracts. Here cotton was scarcely possible, and other kharif crops very poor, the break in August being very harmful. The late rain was favourable to these tracts, and saved them from complete failure. The rain of October (good for the east) damaged the standing kharif crops in the west and central belts.

## *Sholápur District Rainfall of 1884.*

| Táluka= | Bársi, 3 Gauges. | | Sholápur, 5 Gauges. | | Mádha, 4 Gauges. | | Pandharpur, 1 Gauge. | | Karmála, 5 Gauges. | | Sángola, 2 Gauges. | | Málsiras, 1 Gauge. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | |
| January ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·03 | ... | 0·07 | ... | ... | ... | The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious. |
| February ... ... ... | ... | ... | ... | ... | 0·05 | ... | 0·04 | 1 | ... | ... | ... | ... | ... | ... | |
| March ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| April ... ... ... ... | 0·26 | 2 | 0·15 | 1 | 0·18 | 1 | 0·13 | 2 | 0·06 | 1 | 0·09 | 2 | ... | ... | |
| May ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| June, 1st half ... ... ... | 0·16 | 1 | 0·20 | 2 | 0·82 | 1 | 0·09 | 2 | 1·63 | 3 | 0·19 | 1 | 1·85 | 2 | |
| Do. 2nd do. ... ... ... | 0·22 | 2 | 0·15 | 2 | 0·10 | 1 | ... | ... | 0·46 | 3 | 0·05 | ... | ... | ... | |
| July, 1st half ... ... ... | 1·76 | 6 | 1·19 | 7 | 1·21 | 5 | 0·53 | 7 | 1·56 | 5 | 0·53 | 3 | 0·96 | 3 | |
| Do. 2nd do. ... ... ... | 2·14 | 8 | 1·22 | 8 | 1·41 | 6 | 0·88 | 8 | 1·91 | 10 | 1·24 | 5 | 1·01 | 4 | |
| August, 1st half ... ... | 0·46 | 2 | 0·84 | 5 | 0·68 | 3 | 0·11 | 6 | 0·49 | 4 | 0·21 | 1 | 0·08 | 1 | |
| Do. 2nd do. ... ... | 3·05 | 7 | 2·08 | 7 | 2·56 | 6 | 2·82 | 9 | 2·84 | 7 | 1·81 | 4 | 0·95 | 3 | |
| September, 1st half ... ... | 1·20 | 5 | 0·88 | 4 | 1·24 | 4 | 0·79 | 4 | 0·42 | 4 | 0·73 | 3 | 0·14 | 1 | |
| Do. 2nd do. ... ... | 4·80 | 8 | 3·30 | 11 | 1·76 | 6 | 1·81 | 10 | 2·94 | 8 | 3·27 | 7 | 0·74 | 3 | |
| October, 1st half ... ... | 0·75 | 2 | 0·92 | 2 | 0·60 | 2 | 1·78 | 5 | 0·85 | 2 | 1·37 | 2 | 1·21 | 4 | |
| Do. 2nd do. ... ... | 3·82 | 5 | 6·25 | 5 | 2·74 | 4 | 2·92 | 5 | 3·97 | 6 | 3·65 | 5 | 2·89 | 5 | |
| November ... ... ... | 0·03 | ... | 0·26 | 1 | 0·10 | ... | 0·01 | 1 | 0·01 | ... | 0·09 | 2 | ... | ... | |
| December ... ... ... | 2·54 | 5 | 1·30 | 2 | 2·29 | 2 | 3·52 | 4 | 2·01 | 3 | 2·55 | 4 | 2·53 | 3 | |
| Total ... | 21·19 | 53 | 18·74 | 57 | 15·74 | 41 | 15·43 | 64 | 19·18 | 56 | 15·85 | 39 | 12·36 | 29 | |
| Approximate average ... | 29 | ... | 31 | ... | 26 | ... | 28 | ... | 24 | ... | 22 | ... | 20 | ... | |

Fall deficient throughout. Little kharif was sown till the end of July. The small area sown suffered so from the break in August that the kharif crop was generally a complete failure. Scarcity of grass and fodder much felt from August till the September rain slightly improved the condition. The rabi was sown on this rain of September, but the much-needed fall of October was very late. It revived the rabi crop, but was inadequate to counterbalance the effect of the previous long breaks. An abnormal rain in December was very beneficial, and saved the district from scarcity. In Bársi and Sholápur the rabi crops were fair; elsewhere poor. The Government forests were opened to grazing, but by the end of December were grazed down.

## *Sátára District Rainfall of 1884.*

| Táluka= | Jávli, 1 Gauge. | | Pátan, 1 Gauge. | | Wái, 2 Gauges. | | Sátára, 3 Gauges. | | Koregaon, 2 Gauges. | | Karád, 2 Gauges. | | Khatáv, 3 Gauges. | | Khánápur, 1 Gauge. | | Mán, 2 Gauges. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | |
| January ... ... | 0·21 | 1 | 0·45 | 1 | 0·21 | 1 | 0·11 | 1 | 0·16 | 1 | 0·13 | 1 | 0·12 | 1 | 0·09 | 1 | 0·05 | 1 | No record available for Válva and Tásgaon tálukás. Under Jávli the exceptional rainfall of the hill-station Mahábaleshvar (average 262 inches) is not included. *N. B.*—General characteristics: *Western Belt.*—Parts of Jávli, Pátan, Wái, Sátára and Válva. Hilly. Regular and heavy rainfall. *Central Belt.*—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. *Eastern Belt.*—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains. |
| February... ... | ... | ... | ... | ... | ... | ... | 0·13 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| March ... ... | 0·03 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 0·21 | 1 | ... | ... | ... | ... | 0·16 | ... | |
| April ... ... | 0·90 | 5 | ... | ... | 0·22 | 2 | 0·12 | ... | 0·46 | 2 | 1·06 | 5 | 0·12 | 1 | 0·21 | 1 | 0·15 | 2 | |
| May ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·27 | 2 | 0·10 | 1 | ... | ... | |
| June, 1st half ... | 1·39 | 6 | 1·82 | 2 | 0·24 | 1 | 0·90 | 3 | 1·31 | 3 | 0·73 | 4 | 0·52 | 2 | 0·30 | 2 | 0·08 | ... | |
| Do. 2nd do. ... | 15·15 | 15 | 3·39 | 7 | 2·78 | 13 | 1·22 | 5 | 1·00 | 6 | 0·56 | 7 | 0·78 | 4 | 0·52 | 3 | 0·03 | ... | |
| July, 1st half ... | 26·70 | 15 | 7·49 | 15 | 4·03 | 15 | 1·92 | 8 | 1·72 | 6 | 2·18 | 8 | 1·33 | 7 | 1·07 | 6 | 0·16 | 4 | |
| Do. 2nd do. ... | 62·92 | 16 | 15·60 | 16 | 16·91 | 16 | 9·22 | 12 | 12·53 | 13 | 8·02 | 14 | 7·22 | 13 | 5·71 | 13 | 2·98 | 9 | |
| August, 1st half ... | 14·69 | 15 | 6·28 | 12 | 4·89 | 15 | 0·99 | 7 | 0·83 | 6 | 1·43 | 11 | 0·48 | 5 | 0·60 | 4 | 0·17 | 1 | |
| Do. 2nd do. ... | 24·41 | 16 | 4·81 | 15 | 5·98 | 15 | 2·94 | 10 | 4·02 | 12 | 2·19 | 14 | 3·08 | 11 | 1·25 | 6 | 1·43 | 6 | |
| September, 1st half | 15·53 | 15 | 0·80 | 7 | 2·78 | 14 | 1·36 | 8 | 1·21 | 7 | 1·21 | 8 | 0·86 | 6 | 0·77 | 4 | 0·34 | 3 | |
| Do. 2nd do. | 16·12 | 15 | 1·69 | 7 | 2·84 | 14 | 2·28 | 7 | 1·73 | 6 | 1·61 | 8 | 1·06 | 7 | 1·33 | 8 | 1·07 | 6 | |
| October, 1st half . | 2·53 | 10 | ... | ... | 0·13 | 3 | 0·41 | 2 | 0·85 | 3 | ... | ... | 0·78 | 3 | 4·50 | 3 | 0·90 | 5 | |
| Do. 2nd do. | 3·62 | 7 | 2·50 | 5 | 4·13 | 7 | 3·32 | 7 | 3·72 | 7 | 8·54 | 7 | 4·31 | 5 | 6·50 | 7 | 3·64 | 7 | |
| November ... | 0·68 | 3 | ... | ... | 0·28 | 1 | 0·36 | ... | 0·06 | ... | 0·01 | ... | 0·01 | ... | ... | ... | ... | ... | |
| December ... | 1·69 | 10 | 3·53 | 3 | 2·50 | 6 | 3·11 | 6 | 3·39 | 5 | 2·30 | 4 | 5·18 | 5 | 3·45 | 2 | 2·93 | 4 | |
| Total ... | 186·57 | 150 | 48·36 | 90 | 47·92 | 123 | 28·39 | 76 | 32·99 | 77 | 30·18 | 92 | 26·12 | 72 | 26·40 | 61 | 14·09 | 48 | |
| Approximate average ... ... | 72·00 | ... | 65·00 | ... | 38·00 | ... | 40·00 | ... | 27·00 | ... | 27·00 | ... | 21·00 | ... | 24·00 | ... | 21·00 | ... | |

May rain, useful for preparing the land, absent. The monsoon rain began late, and was too light for sowing till the 2nd half of July. This was specially felt in the western and central belts, and tended to a deficiency of early grass, and delayed detrimentally the sowing of early crops. The kharif crops are not so important in the eastern belt. In August rain was favourable; but in September and 1st half of October the want of rain was detrimental to the growing kharif, and delayed the sowing of the late crops. The October rain was very beneficial. A heavy fall in December, though of great use to some rabi crops, is liable to damage the kharif.

## *Belgaum District Rainfall of 1884.*

| Táluka= | Belgaum, 1 Gauge. | | Sampgaon, 1 Gauge. | | Chikodi, 1 Gauge. | | Parasgad, 2 Gauges. | | Athni, 1 Gauge. | | Gokák, 6 Gauges. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | |
| January ... ... | 0·36 | 1 | 0·10 | 1 | ... | ... | 0·08 | 1 | 0·05 | 1 | 0·15 | 1 | No returns available from the Khánápur táluka. In Chikodi gauging began on 5th May; in Athni it was stopped on 21st January and began again on 18th June. The 5 cents of rain in January in Athni fell on the 16th. Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later). |
| February ... ... | 0·08 | 1 | 0·13 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | |
| March ... ... | 0·09 | 3 | 0·05 | 1 | ... | ... | 0·02 | ... | ... | ... | ... | ... | |
| April ... ... | 1·85 | 7 | 0·79 | 3 | ... | ... | 0·86 | 4 | ... | ... | 1·05 | 3 | |
| May ... ... | 0·23 | 3 | ... | ... | ... | ... | 0·42 | 2 | ... | ... | 0·33 | 2 | |
| June, 1st half ... ... | 0·21 | 3 | 0·47 | 3 | ... | ... | 1·71 | 2 | ... | ... | 1·25 | 2 | |
| Do. 2nd do. ... ... | 1·74 | 9 | 0·41 | 4 | 0·53 | 3 | 1·06 | 4 | 0·30 | 1 | 0·06 | 1 | |
| July, 1st half ... ... | 6·37 | 14 | 1·83 | 8 | 2·32 | 2 | 1·34 | 4 | 0·30 | 3 | 0·93 | 3 | |
| Do. 2nd do. ... ... | 13·69 | 16 | 6·72 | 11 | 2·44 | 4 | 1·67 | 7 | 1·15 | 5 | 1·22 | 5 | |
| August, 1st half ... ... | 5·26 | 13 | 1·57 | 3 | 2·31 | 3 | 0·96 | 4 | 0·10 | 1 | 0·47 | 2 | |
| Do. 2nd do. ... ... | 6·16 | 15 | 0·68 | 4 | 0·75 | 4 | 0·62 | 4 | 0·55 | 4 | 0·28 | 3 | |
| September, 1st half ... | 1·55 | 10 | 0·29 | 2 | 0·50 | 2 | 0·32 | 4 | 3·29 | 3 | 0·42 | 2 | |
| Do. 2nd do. ... | 2·12 | 14 | 0·21 | 2 | 0·60 | 2 | 0·14 | 3 | 1·66 | 6 | 0·73 | 3 | |
| October, 1st half ... | 0·15 | 3 | 1·70 | 2 | 1·24 | 1 | 1·31 | 2 | 0·12 | 2 | 1·52 | 2 | |
| Do. 2nd do. ... | 3·17 | 8 | 2·02 | 5 | 2·09 | 3 | 5·74 | 6 | 1·70 | 7 | 4·11 | 4 | |
| November ... ... | 0·27 | 2 | ... | ... | 0·38 | 1 | 0·01 | ... | 0·39 | 2 | 0·09 | 1 | |
| December ... ... | 0·73 | 4 | 1·22 | 3 | 0·80 | 1 | 1·07 | 3 | ... | ... | 1·23 | 2 | |
| Total ... | 44·03 | 126 | 18·19 | 53 | 13·96 | 26 | 17·33 | 50 | 9·61 | 35 | 13·84 | 36 | |
| Approximate average ... | 47 | ... | 23 | ... | 21 | ... | 20 | ... | 19 | ... | 17 | ... | |

The ante-monsoon thunderstorms were good, though insufficient for rice sowing. The monsoon broke late, and sowings were retarded by absence of rain in the 2nd half of June. Rice (Belgaum, Khánápur) was refreshed by the fall of July, which, however, did not extend to the eastern tálukás. In Athni and Gokák rain sufficient for sowing did not come till very late, and large areas were left unsown. Parasgad was hardly better off. The October rain was general and very favourable both to standing crops and for sowing rabi. Scant rain, however, in the eastern tracts left little moisture, and December rain was much desired. It came but too late to allow of a good rabi season. Athni suffered most, and the absence of late rain in rich Chikodi made fodder very scarce. A large area of kharif land was sown in the rabi season, but gave a very poor return. The want of fodder was felt everywhere, except in the west, and cattle were sold for nominal prices in Athni, and many taken to the Gháts for pasture.

## *Bijápur District Rainfall of 1884.*

| Táluka= | Bijápur, 6 Gauges. | | Bágalkot, 6 Gauges. | | Bágevádi, 2 Gauges. | | Bádámi, 2 Gauges. | | Hungund, 2 Gauges. | | Indi, 1 Gauge. | | Muddebihál, 1 Gauge. | | Sindgi, 1 Gauge. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | |
| January ... | 0·26 | 1 | 0·04 | 1 | 0·42 | 2 | 0·34 | 2 | 0·40 | 2 | ... | ... | 0·26 | 1 | 0·59 | 2 | This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukás of Bijápur, Indi and Sindgi have a capricious and light rainfall. |
| February ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| March ... | ... | ... | 0·02 | ... | ... | ... | ... | ... | 0·02 | ... | ... | ... | 0·05 | 1 | ... | ... | |
| April ... | 0·23 | 2 | 0·60 | 3 | 0·26 | 3 | 1·10 | 3 | 0·45 | 5 | ... | ... | 0·42 | 5 | 0·46 | 3 | |
| May ... | 0·05 | ... | 0·06 | 1 | 1·39 | 4 | ... | ... | 0·27 | 3 | ... | ... | 0·20 | 1 | 0·18 | 1 | |
| June, 1st half ... | 0·11 | 1 | 1·26 | 2 | 0·20 | 1 | 4·62 | 2 | 1·75 | 3 | ... | ... | 1·18 | 4 | 0·83 | 2 | |
| Do. 2nd do. ... | 0·32 | 1 | 0·05 | 2 | 0·38 | 2 | 0·11 | 1 | 0·44 | 2 | 0·60 | 1 | 0·43 | 7 | 1·52 | 4 | |
| July, 1st half ... | 0·34 | 3 | 0·66 | 4 | 0·40 | 5 | 0·94 | 3 | 1·25 | 5 | 1·92 | 2 | 0·51 | 7 | 2·13 | 7 | |
| Do. 2nd do. ... | 1·39 | 6 | 1·03 | 5 | 1·23 | 6 | 2·28 | 6 | 1·44 | 7 | 1·34 | 3 | 1·55 | 9 | 1·60 | 9 | |
| August, 1st half ... | 0·35 | 2 | 0·11 | 2 | 1·64 | 3 | 0·20 | 2 | 0·39 | 3 | ... | ... | 0·34 | 4 | 2·88 | 7 | |
| Do. 2nd do. ... | 0·96 | 4 | 1·06 | 3 | 1·03 | 5 | 1·58 | 2 | 0·61 | 6 | 1·10 | 3 | 1·46 | 5 | 2·03 | 8 | |
| September, 1st half ... | 1·43 | 3 | 1·06 | 4 | 1·10 | 2 | 1·46 | 2 | 0·63 | 4 | 0·59 | 3 | 0·15 | 3 | 0·62 | 3 | |
| Do. 2nd do. ... | 1·68 | 6 | 2·06 | 7 | 2·26 | 6 | 0·89 | 5 | 1·23 | 7 | 3·00 | 10 | 1·10 | 7 | 1·89 | 7 | |
| October, 1st half ... | 0·85 | 2 | 0·59 | 1 | 1·34 | 3 | 1·32 | 3 | 0·22 | 3 | 0·54 | 3 | 0·24 | 4 | 0·80 | 4 | |
| Do. 2nd do. ... | 1·37 | 5 | 6·12 | 6 | 2·49 | 5 | 5·39 | 7 | 4·30 | 9 | 1·98 | 6 | 3·70 | 5 | 2·59 | 7 | |
| November ... | 0·05 | 1 | ... | ... | 0·01 | ... | ... | ... | 0·05 | 1 | 0·03 | 2 | ... | ... | ... | ... | |
| December ... | 0·29 | 1 | 0·74 | 2 | 3·34 | 3 | 0·29 | 1 | 1·23 | 2 | 1·39 | 4 | 1·21 | 3 | 3·70 | 2 | |
| Total ... | 9·68 | 38 | 15·46 | 43 | 17·49 | 50 | 20·52 | 39 | 14·68 | 62 | 12 49 | 37 | 12·80 | 66 | 21·82 | 66 | |
| Approximate average. | 23·88 | ... | 22·39 | ... | 27·81 | ... | 24·27 | ... | 23·37 | ... | 27·36 | ... | 23·30 | ... | 26·34 | ... | |

The rain of the year was scant and untimely, especially that from the south-west monsoon. The ante-monsoon showers were good, except in Indi. Kharif sowings began in Bádámi, Hungund and Sindgi with the good fall of July (2nd half), but were retarded elsewhere. Sindgi only got good rain in August. Even Hungund received very little. The kharif season was now over. In Indi, Bijápur, Bágevádi and Muddebihál no khairif was sown, and the sown crops elsewhere suffered severely, except in Sindgi. Fodder and drinking-water became very scarce. The cattle were moved to the west. The fall of September and 1st half of October was deficient. Rabi sowing was not general. Prospects were very bad till the heavy rain of October came. Rabi sowings were completed, and extended over much light land, only suitable for kharif. But a long break followed. Some good was secured from the late December rain. Kharif gave a small outturn in Bágalkot, Bádámi, Hungund and Sindgi. Rabi was only fair on the banks of the Krishna and Ghatprabha. In Indi, Bijápur and part of Bágevádi it was a failure. Village inspection was started in the worst tálukás, but, owing principally to the newly opened railway, prices did not rise to famine rates.

## *Dhárwár District Rainfall of 1884.*

| Hindu Nakshatras. | English Date. | Hubli, 1 Gauge. | | Gadag, 2 Gauges. | | Ránebennur, 1 Gauge. | | Kod, 1 Gauge. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | |
| | | Inches. | | Inches. | | Inches. | | Inches | | |
| ..... | 1st January to 10th April ... | ... | ... | 0·11 | 1 | ... | ... | ... | ... | Returns from only 4 tálukás out of 11 available. The eleven cents of rain recorded in Gagad between 1st January and 10th April fell on 16th January. The district is composed of hilly tracts,—the maládgrowing rice and hill grains (Hángal, Kalghatgi and Kod), and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli) or cotton, but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur tálukás are partly malád. |
| Ashvini ... ... | 11th April to 24th April... ... | 1·42 | 2 | 0·26 | 1 | 0·36 | 1 | 0·25 | 1 | |
| Bharni ... ... | 25th April to 8th May ... ... | 0·32 | 2 | 0·71 | 1 | 1·93 | 5 | 1·99 | 3 | |
| Krittika ... ... | 9th May to 22nd May ... ... | 0·15 | 1 | ... | ... | 0·14 | 1 | ... | ... | |
| Rohini ... ... | 23rd May to 4th June ... ... | ... | ... | 0·51 | 1 | 0·48 | 2 | ... | ... | |
| Mrig ... ... ... | 5th June to 19th June ... ... | 2·12 | 4 | 0·50 | 1 | 0·27 | 2 | 0·55 | 2 | |
| A'radra ... ... | 20th June to 3rd July ... ... | 1·37 | 7 | ... | ... | 0·05 | 1 | 1·10 | 4 | |
| Punarvasu ... ... | 4th July to 17th July ... ... | 2·04 | 7 | 0·22 | 2 | 1·15 | 5 | 3·77 | 10 | |
| Pushya ... ... | 18th July to 31st July ... ... | 2·48 | 10 | 0·58 | 1 | 1·01 | 2 | 1·99 | 7 | |
| A'shlesha ... ... | 1st August to 14th August ... | 0·87 | 4 | 1·45 | 2 | 1·30 | 3 | 2·64 | 7 | |
| Magha... ... ... | 15th August to 27th August ... | 0·86 | 3 | 0·87 | 2 | ... | ... | 1·44 | 4 | |
| Purva ... ... ... | 28th August to 10th September... | 1·17 | 4 | ... | ... | 1·13 | 1 | 1·21 | 2 | The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: "Good rain won't give a big crop, nor will bad rain bring famine." |
| Uttara... ... ... | 11th September to 24th September | 0·53 | 1 | 1·32 | 2 | ... | ... | ... | ... | |
| Hast ... ... ... | 25th September to 7th October ... | 0·29 | 3 | 0·29 | 1 | 0·63 | 3 | 2·00 | 3 | |
| Chitra... ... ... | 8th October to 21st October ... | 0·73 | 3 | 3·28 | 2 | 0·35 | 2 | 0·86 | 3 | |
| Sváti ... ... ... | 22nd October to 3rd November... | 2·38 | 3 | 2·19 | 1 | 9·33 | 6 | 2·67 | 5 | |
| Vishákha ... ... | 4th November to 17th November | ... | ... | ... | ... | 0·24 | 2 | 1·79 | 4 | |
| Anurádha ... ... | 18th November to 30th November | ... | ... | ... | ... | ... | ... | ... | ... | This is in comparison to the fertile black-soil plains where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought. |
| ..... | December ... ... ... ... | 1·00 | 1 | 1·03 | 2 | 0·53 | 1 | ... | ... | |
| | Total ... | 17·73 | 55 | 13·32 | 20 | 18·90 | 37 | 22·26 | 55 | |
| | Approximate average ... | 28 | ... | 25 | ... | 22 | ... | 26 | ... | |

The ante-monsoon rains were light and unseasonable. The kharif rains were also poor. Kharif sowings, including rice in the malád, were much delayed, and in the end were incomplete. The rabi rains also were late and light. The rain of late October (Sváti) improved kharif and rabi prospects, diminished the great water scarcity which had prevailed since April, and enabled the rayats to sow the unsown kharif area with rabi crops. The unseasonable sowing gave very poor results. On the whole, the season was much below average. Rice suffered from want of rain when rain was greatly needed: so jowári. All the rabi (especially cotton and wheat) was late. The cotton and wheat tálukás, the best black-soil, were worse off than the tracts where wheat is little grown, but where cotton is superior and extensively sown. In a separate paragraph the season is reviewed in the light of the current proverbs, which indicate when rain is seasonable for various staples. In Gadag the fall was most unseasonable. The late rains brought up the total a great deal, but even then the fall was much below average, and the late rains were too heavy. It is a pity that other returns are not available.

*Note on the Dhárwár Rainfall Retur*

The rains may be divided into four great periods :—

(1.) The *Ante-monsoon Rain* valued for preparing the land in the black soil and for sowing rice in the Malád.

(2.) The *Kharif Rains* (from Mrig), 5th June to 14th August, most wanted by the rice and other crops of the Malád.

(3.) The *Rabi Rain* (from Magha), 15th August to 21st October, chiefly needed in the black-soil plains.

(4.) The *Late Rains* needed for bringing on the *rabi*. These at first, *i.e.* from the third week in October, should be very steady and heavy. They should not last long, for if they continue, crop insect-pests and other diseases are brought on the *rabi*, while the ripening *kharif* is much injured.

So the proverbs run :—

*'Mrig-panchaka Malládakke, Maghá-panchaka bailshimige'* and *'Mriga-panchaka, Maghá-panchaka madasidare mugalíge kaikotteno shivaráya.'*

The 5 rains from Mrig for the Malád and the 5 from Magha for the black soil, but if both are accorded I raise my hands in thanksgiving, O God !

The *Ante-monsoon Rains* were light as far as the records show, and unseasonable, as the proverbs seem to indicate. Rain in Ashvini is very unpromising.

*"If it rains in Ashvini, water and fodder will fail."*

There was rain. I cannot lay much stress on the prognostication, but the facts are that water and fodder were very scarce indeed. From April and May right on to the end of October every report notices the scarcity in the plains, and in the Malád the tanks were dry, even large ones, which had not failed for years.

Bharni rain "*is a lump of gold*" in the Malád—

*"If there is abundant rain in Bharni, a cart of rice will sell for a rupee."*

There was fair rain as far as the incomplete records show, but taken with the reports, it is clear that there was not sufficient for rice sowing.

Rain in Krittika, as several proverbs say, is most unlucky. There was none in Kod, and it was light elsewhere.

Rohini rain, on the other hand, is eagerly watched for—

*"Rohini rain will fill the streets with jowári ; all the roads will be full of rice."*

This was absent or very light.

On the whole, therefore, judging by the comparison of the proverbs with the facts, the season looked unpromising, especially for the Malád districts, to which the proverbs chiefly apply.

*The Kharif Rains.*—The maxims assert that in Mrig there should be steady rain, not sporadic thunderstorms ; that in A'radra rain must come, or the worst results must be looked for—

*"No A'radra rain, the crops will fail."* *"A'radra sets an example, and the other nakshatras follow it."*

In Kod and Hubli fair rain in A'radra was followed by better in July (Punarvasu and Pushya). In Gadag there was none, and a miserable fall succeeded in July. In Ránebennur, however, the proverb appears to have been falsified, as a scant fall of A'radra was followed by good rain in July and August.

The Mrig rain was light; sowings were delayed in some of the rice districts and all over the black soil. The July rain improved prospects, but rice was not all sown till the end of July, and jowári was even then behind-hand, and great anxiety was felt in the black-soil districts. Fodder was scarce. Standing crops were withering, and late crop sowing was retarded.

*Rabi Rains.*—The proverbs indicate that the Magha rain will give a rich jowári crop, that the absence of rain in Purva means absence of fodder and scarcity of water, that the Uttara rain is as important to cotton and other rabi crops as A'radra to the kharif, that Hast rain will give a fair yield of cereals

and a needed moisture for preparing the land for the late rabi, and that the Chitra rain is very local :—

*'It will wet one horn of a bullock and not the other'*

and that it is greatly needed for rice. The Magha rains were very scant, Uttara and Hast were very poor. The reports show that rabi sowings were retarded, and the kharif crops suffered from drought.

*Late Rains.*—The Sváti rain is extolled in the proverbs—

*'If in Sváti rain does not come, none afterwards can be hoped for,' 'Sváti rains pearls'.*

It is characterized as a very heavy rain. Such were the facts. It came abundantly and generally. The sowing of late crops was completed. The scarcity of water was removed. The kharif crops revived.

Vishákha Rain is reprobated. It brings crop insect-pests and harms the ripening crops. Still more harmful is the rain of Anurádha. The district was free, or nearly free, from these rains, and the close of the monsoon was favourable.

On the whole the season was poor, though better in the kharif than the rabi tálukás. The black-soil plains suffered most. The kharif there was very poor and sparsely sown, while the rabi was late, and only saved by the Sváti rain.

# APPENDICES.

# APPENDICES.

## A.

*Examination Papers referred to in para. 23 of the Report.*

### Paper I.

From the annexed lithographed copy of the rough sketches of a survey number taken from a measurer's rough field book, plot the field to the usual scale. Fill up completely the requisite detailed entries of the fair field book on the printed forms supplied, showing the boundary sketch and calculating the area.

*Note.*—The number was a difficult one containing two tanks and both rice and dry-crop land. One sketch showed the whole number with the measurements taken in the field; the other, the separate sketch, showing the detailed measurements of the tanks and rice land.

### Paper II.

I. A rough sketch of a field is given on the annexed sheet. The measurements taken by chain and cross staff are shown. From these plot the field map to the usual scale, numbering the trapezia, and calculate the area. Show how the calculations should be exhibited in the fair-book form. Draw the boundary-mark sketch, showing on it the mounds and stones required.

II. In the field map on annexed sheet drawn to scale according to the measurements taken in the field state whether any error has been made.

III. Show how to divide this field into two equal parts with the help of the measurements given, showing the dividing line in red ink. Calculate the area of each part. Supposing each part to be a subordinate survey number, show what marks would be required to indicate the division.

IV. In the same field show in black ink what stones and mounds are necessary. Then, supposing that a hedge has been erected on the north boundary and a *sarbándh* on the east, show in red ink what alterations would be caused in the marks, and how on a survey map the existence of the hedge and *sarbándh* would be indicated.

V. By a partition decree a portion of a survey number has to be given to one party. Would the partition necessitate the recognition of the part marked off as a separate survey number? If so, what serial number would you assign to it in the Field Register? Would the partition necessitate any alteration in the A'kárband? Would you erect regular boundary marks? If not, how would you mark the dividing line?

VI. A new road passes through two or more survey numbers. Show how the line of the road should be marked, supposing that the numbers through which the line passes are not to be divided into separate survey numbers, the area occupied by the road being deducted as *pot-kharáb*.

VII. What should be the length, breadth and height of a new mound? And what the length of a new stone? What portion of the length should be under ground? How high should a mound be to be considered in repair? How long and wide should *sarbándh* be to be recognised as a permanent mark?

VIII. By the flooding of a river, the marks of one side of a survey number have been obliterated. How would you replace them? If you suspect that there has been increase of area by alluvion or decrease by diluvion, what steps would you take? Under what limits would an increase by alluvion be liable to assessment? How far would you act on your authority, and when would it be necessary to report for orders?

IX. Show what are the symbols used in survey maps for trees, roads, streams, made roads, footpaths, temples, hedges, houses, and tanks.

X. When for any reason a survey number is re-measured, if it is found that the former measurement was inaccurate, up to what limit would the difference be neglected? If the difference exceeds the prescribed limit, what should be done?

XI. What breadth is generally allowed to a road passing between two survey numbers? How wide is a footpath made? What kinds of roads are deducted as *pot-kharáb*, and what kinds require a division of the lands on each side into separate numbers?

---

## B.

*Revised Rules for Recruitment of Circle Inspectors referred to in para. 24 of the Report.*

1. Circle Inspectors will be graded on grades of Rs. 30, 35, 40, 45 and 50. These rates will include all travelling allowances within the limits of the tálukás to which they may be posted.

2. About half of the posts will be reserved for survey subordinates, classers and measurers, to be selected as they can be spared on the requisition of the Director of Agriculture by the Superintendents of Survey and approved by the Director of Agriculture. This provision only applies to districts where the survey records may have been handed over to the custody of the Agricultural Department.

3. Subject to this rule, passed Agricultural Students of the College of Science will be regarded as preferentially eligible for appointments as Circle Inspectors as vacancies occur in the establishment of Circle Inspectors, and will ordinarily begin on the lowest grade.

4. The residue of the posts will be filled by selected Revenue Kárkúns chosen principally from the district in which the Circle Inspector Staff is to be introduced by the Collector, and approved by the Director of Agriculture. Such Kárkúns will be placed in a grade apportioned to the rate of pay drawn at the time of transfer as Circle Inspectors.

5. Circle Inspectors appointed under Rules 3 and 4 will be required to study measuring, the rules of boundary marks, &c., if they have not already qualified to the satisfaction of the Director of Agriculture, for three months on half the pay of the grade to which they have been admitted. This period will be extended for three months longer on a subsistence allowance of Rs. 10 per mensem in the case of any Inspector failing to qualify satisfactorily in the first three months. The Director reserves to himself the right of causing a Revenue Kárkún to revert to his permanent appointment instead of allowing him the extension, or, in the case of an Inspector not holding apart from the Inspectorship any permanent appointment, to vacate the appointment unconditionally.

6. A Revenue Kárkún holding an appointment as Circle Inspector may by the Director of Agriculture with the concurrence of the Collector be called on to revert to the regular line if the post is required for a passed Agricultural Student of the College of Science or other candidate trained under Rule 7 or under Rules hereafter to be made.

7. Passed Students of the Agricultural Classes attached to High Schools will be preferentially eligible to appointment as Circle Inspectors after they have completed two years' pensionable service as a Revenue Kárkún, and may notify themselves as candidates to the Director of Agriculture on first joining the Revenue Department.

8. Vacancies caused in the Revenue Department by the appointment of Inspectors will be filled, so far as the Collector finds practicable, by passed Agricultural Students of the High School Classes after provision has been made for any Kárkúns ousted by the reduction in the number of Bhág Kárkúns which may accompany the introduction of the establishment of Inspectors, provided that such Students declare in their application that they intend under Rule 7 to apply for the post of Inspector as soon as they have qualified.

9. The above rules are provisional, and subject to the condition that candidates give proof of good character and physique, and that they know the vernacular of the district where they seek employment.

## C.

*Exports of Indian Wheat from the Port of Bombay to all Ports beyond the Presidency from 1880 to 1885, referred to in para. 70 of the Report.*

| Months. | Years. | | | | | |
|---|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... ... ... | 2,927 | 21,768 | 85,674 | 31,019 | 15,285 | 41,846 |
| February ... ... ... | 1,626 | 19,275 | 40,239 | 25,403 | 15,933 | 32,366 |
| March ... ... ... | 3,407 | 20,000 | 30,557 | 29,516 | 14,997 | 45,824 |
| April ... ... ... | 4,985 | 32,481 | 30,390 | 37,503 | 15,230 | 38,933 |
| May ... ... ... | 17,110 | 42,428 | 67,886 | 76,205 | 44,831 | 56,871 |
| June ... ... ... | 19,407 | 52,236 | 37,190 | 82,881 | 54,894 | 66,602 |
| July ... ... ... | 15,055 | 47,369 | 19,386 | 55,921 | 65,437 | 33,379 |
| August ... ... ... | 7,832 | 28,172 | 5,396 | 32,425 | 45,546 | 38,004 |
| September ... ... | 4,193 | 35,132 | 13,797 | 36,265 | 30,974 | ... |
| October ... ... ... | 6,527 | 48,835 | 22,317 | 18,466 | 19,045 | ... |
| November ... ... ... | 8,652 | 76,714 | 34,159 | 29,319 | 28,038 | ... |
| December ... ... ... | 22,991 | 48,559 | 32,703 | 34,508 | 27,806 | ... |
| Total ... | 114,712 | 472,969 | 419,694 | 489,431 | 378,016 | 353,825 |

## D.

### Proverbs on Cultivation.

1. Work done by one-self is best, then that done by one's son, but worst of all is the work done by a hireling.

2. It is better to till a small field well than a large one badly.

3. One pair of good bullocks is better than 10 bad ones.

4. The farmer who lives out of his field, is like the fish who tries to live out of the water.

5. Drive the plough with one hand and eat your bread with the other.

6. Jowári given for weeding is not lost.

7. A field needs ploughing as much as a house does repairing.

8. There is a crore of rupees buried under the pole of the threshing floor.

9. He is no farmer who fears cold and rain, nor is he a hero who is afraid of a bow.

10. Black soil with patches of *kunda* (a deep-rooted grass) is like a man with itch.

11. Rotation of crops for black soil, but manure for the red.

12. Give me, says the soil, your refuse, and I will give back fresh sprouts.

13. Weed a month after sowing. Your crop will ear a month after weeding, and you may cut it a month after earing.

14. Wash your jowári before sowing as you wash your hands before eating. (This moistening of the seed is to cause quick germination.)

15. A handful of good seed is better than a lapful of bad.

16. Plough in *til* (sesamum) and dig up sweet potatoes. [Both are ways of improving land profitably. In one there is the green manure; in the other, the stirring of the soil.]

*Agriculture: Annual Report of the Director of Agriculture, Bombay Presidency for the year 1884-85.*

No. 18.

REVENUE DEPARTMENT.

Bombay Castle, 5th January 1886.

Letter from the Director of Agriculture, No. 1645, dated 23rd October 1885—Submitting the second Annual Report of the Agricultural Department of the Bombay Presidency for the year 1884-85.

RESOLUTION.—The range of subjects discussed in this—the second—Annual Report of the Director of Agriculture is very wide. Mr. Ozanne has as far as possible given his best attention to every event directly or indirectly connected with agriculture which occurred in the Presidency in the year under report. This course is the natural result of the importance of the Department, which extends over a large field of operations and makes it difficult for the Director of Agriculture to concentrate his energies, which should not be exposed to an undue strain.

2. In the improvement of statistics, which is one of the most important objects of the creation of the Department, material progress has already been made. The forms suitable for the tabulation of those relating to land and agriculture in this Presidency have been settled and approved by the Government of India, and the Manual of Revenue Accounts is under revision. The statistics of the year under review were not tabulated in the new forms, but those of the Dhárwár District were tested by the establishment of Circle Inspectors, the organization of which was described in the first annual report of the Director of Agriculture, and His Excellency the Governor in Council has learned with satisfaction that greater accuracy has already been observed. In the course of the year a similar establishment was organized in the Bijápur District, but it was for the most part employed in enquiries regarding the extent to which crops had failed. The Governor in Council entirely concurs in the view of the Director of Agriculture that the District Inspector and the Circle Inspectors should aid in compiling the statistics which they test, and that the tendency of Mámlatdárs to employ them on extraneous duties should be at once checked. It appears that a thorough examination of boundary-marks and correction of the maps will at first occupy a large proportion of the time of the establishments.

3. Mr. Ozanne states that the establishments of Circle Inspectors sanctioned for the Dhárwár and Bijápur Districts are adequate, but that the time has come to look to the Survey Department for further aid in supervision. As regards the general question of gradually transferring to the Agricultural Department Assistant Superintendents of Survey no immediate decision is required and the subject is of too great importance to be disposed of in reviewing an Annual Administration Report. His Excellency in Council would however observe that Mr. Ozanne has produced strong evidence to demonstrate the necessity for adopting his proposal. The duties which he enumerates as those which the officers transferred would have to perform are such as cannot and should not be performed by Assistant Collectors. The tendency of Mr. Ozanne's proposal is simply to preserve and continue the excellent work done by the Survey and Settlement Department.

4. Separate reports on the working of the Bhadgaon and Hyderabad Farms, to the re-organization of which Mr. Ozanne has given considerable attention, have been received and will be separately reviewed. His Excellency in Council learns with much satisfaction that valuable results are anticipated from the Nadiád Farm, which is a private institution. The efforts of the public-spirited gentlemen who are co-operating for the improvement of agriculture are very laudable, and the Governor in Council trusts that their efforts will be crowned with success, and their excellent example followed in other places as the result cannot but be very beneficial to the country. The enterprise shown by Mr. Bechardás Veháridás Desái in assisting the measures adopted by Government and in adopting measures on his own account for improving the production and curing of tobacco is also worthy of acknowledgment and encouragement.

5. It is a matter for regret that the efforts made to improve the quality of wheat by the distribution of selected seed were to a large extent frustrated. Most of the seed was damaged by weevils, while the wheat crop in the places in the Southern Marátha Country selected for experiment almost entirely failed and in the Deccan was injured by rust. A successful result was however obtained in the Surat District. The distribution of good seed in a judicious manner will be continued, as this measure more than any other is likely to be productive of visible good results. The superiority of the bájri seed obtained by Mr. Strachan at the Hyderabad Farm by a process of selection continued for several years is said to be very marked and to have attracted the attention of cultivators in the vicinity.

6. The experiment made with cotton seed picked from five-lobed bolls in Dhárwár has not in the opinion of the Director of Agriculture been very successful. In Government Resolution No. 7296, dated 12th September 1884, the Collector was desired to discontinue the collection of seed except for the purpose of investigating the result of sowing four or five-lobed pods and to offer prizes for the best samples of unginned cotton. Steam gin factories have been established at Hubli and Gadag, and it may safely be assumed that the most suitable means of ginning the cotton grown in the Dhárwár District, now that it has been opened up by railways, will be supplied by private enterprise. The Collector should be requested to impress on the Municipalities of Hubli and Gadag the expediency in their own interests as well as in the general interests of the district of carrying out as soon as possible the projects of establishing cotton markets in these towns.

7. The remarks in paragraph 114 of the Report regarding the supply of arrowroot to the Commissariat Department should be communicated to the Military Department for consideration.

8. The Director narrates in detail and with reference to Resolutions of Government the course of gradual development of the means of obtaining improved agricultural statistics. This is useful and convenient for reference while the work of constitution is in progress. He also gives a summary of the discussions which have been going on in the year of report as to improving the export staples—wheat and cotton—and the utility of ensilage in regard to which latter his opinion is at variance with the conclusion reached by Government in the Military Department and must be justified by further experiment.

9. The report contains ample evidence of Mr. Ozanne's activity in dealing with a great number of subjects and special aptitude for the conduct of the important duties entrusted to him in starting a new Department. He has adopted the proper method of careful and patient enquiry. His labours have already yielded practical results, which are indicative of what will eventually be obtained by a continued course of experiment and scientific observation. By the steady

pursuit of a definite object there is a reasonable prospect of the agriculture of the Presidency being substantially improved.

J. MONTEATH,

Under Secretary to Government.

To

The Director of Agriculture,
The Commissioner, N. D.,
The Commissioner, C. D.,
The Commissioner, S. D.,
The Commissioner in Sind,
All Collectors, including the Collectors and Deputy Commissioners in Sind,
The Superintendent, Government Experimental Farm at Bhadgaon in Khándesh,
The Superintendent, Government Experimental Farm at Hyderabad in Sind,
The Superintendent, Botanical Gardens, Poona,
The Survey and Settlement Commissioner,
The Conservator of Forests, N. C.,
The Conservator of Forests, S. C.,
The Conservator of Forests, Sind Circle,
The Accountant General,
The Military Department of the Secretariat,
The Political Department of the Secretariat,
The Public Works Department of the Secretariat, Irrigation,
} With copies of the report.

The Secretary of State for India,
The Government of India.
} By letter.

# ANNUAL REPORT

OF THE

# DIRECTOR OF AGRICULTURE,

## BOMBAY PRESIDENCY

FOR THE YEAR 1885-86.

133136

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1886.
[*Price—7 Annas 6 Pies.*]

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No. 2435 OF 1886.

FROM

E. C. OZANNE, ESQ.,
Director of Agriculture,
Bombay;

TO

THE SECRETARY TO GOVERNMENT,
Revenue Department,
Bombay.

*Poona, 1st November 1886.*

SIR,

This is the Third Annual Report of the Agricultural Department. I have in an appendix (A.) shown how far I have been able to travel during the year. I was absent nearly six months from head-quarters. A considerable portion of my time was taken up by the Forest Commission, of which I am a member. My duties as such left the Circle Inspectors of Bijápur and Dhárwár insufficiently supervised, and it was not till the 1st July that assistance, as will be detailed further on, was vouchsafed to me.

2. My head-quarter establishment has, owing to gradual development of work, undergone redistribution. It now consists of 2 Superintendents in charge of agricultural and statistical branches respectively, and 18 Clerks. The cost is Rs. 820 per mensem as against Rs. 662 at the time of my last report. The Head Clerk of the late Gazetteer establishment on Rs. 125 is in addition temporarily attached to the office on special duty to compile analytical district accounts required by the Famine Code. The Survey Instructor, on the other hand, has, since Mr. Price's transfer to my department, been abolished. The sanctioned sum for 2 Survey Instructors (Rs. 80) has been utilized to provide an office for Mr. Price.

My Assistant Ráo Bahádur Bhimbhái Kirpárám has worked with his well-proved energy and ability, with hardly a day's absence in the whole year. He has been heartily assisted by the two Superintendents, Mr. Vaikunthrám Manmathrám Mehta and Mr. Itchárám Bhagvándás, both graduates, and both trained by Mr. Bhimbhái under Mr. James Campbell, Compiler of the Gazetteer.

I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

3. Under this head come

A.—The maintenance of the record of the Revenue Survey after the introduction of the Revision Settlement, and its correction.

B.—The registration and compilation of agricultural statistics

(*a*) for settlement purposes,

(*b*) for general purposes of administration

and

(*c*) for use in times of distress and famine.

4 The survey record is entrusted to the Agricultural Department as soon as the revised measurement and classification by the Revenue Survey Department are completed. Though so far the district staff of the former department has been only introduced on the final departure of the survey, it is an essential feature in the sanctioned programme that such a staff in the interests of improved statistics and to strengthen the ordinary revenue establishments should be introduced as early as possible throughout the Presidency. Financial pressure has been the only bar to such extension. In the event of the formation of the special staff supervised by the Agricultural Department, in other than finally measured and classified districts, the survey element will be absent, though full provision for its addition has been made to take effect immediately on the transfer of the survey records.

5. The scheme contemplates the formation of a táluka staff of inspecting officers under the Mámlatdár, to test the work of the village officers, and a head-quarter district staff under the Director of Agriculture, to supervise the táluka Inspectors. The revenue work of the Inspectors is thus supervised by one department, and the technical work, including the improvement of village agricultural and economic statistics, by another department. There is thus a dual control, the inevitable disadvantages of which can only be reduced to a minimum by the harmonious and hearty co-operation of the Agricultural with the Revenue Department proper. The staff has been as yet introduced into only two districts. There has been no extension during the year under report.

6. I noticed last year (para. 22) the great desirability of the utilization of the superior officers of the Survey Department, as they can be spared in the course of the gradual contraction of the operations of that department, in the capacity of Assistants to the Director of Agriculture in charge of the records and work of two districts, in lieu of following the specific recommendation of the Famine Commission that the district staff should be placed under a Revenue officer of the rank of Deputy Collector.

Owing to the increased calls on my own time, one special reason for which was my appointment as member of the Forest Commission, I made a special representation to Government in November last. This representation was cordially supported by the Survey and Settlement Commissioner, and was responded to by the transfer of one of the best and most experienced of the Assistant Superintendents of Survey, Mr. W. S. Price, to be in charge of the Survey Record of Bijápur and Dhárwár. The transfer was fixed for the 1st April, but owing to pressure of settlement work Mr. Price, being the Assistant Settlement Officer for the Southern Marátha Survey, could not be spared till the 1st July, when he was placed under my orders. The delay was very prejudicial to the special interests of the work of my department. The district staff and the táluka Inspectors were left insufficiently supervised, and the work necessarily languished. The Revenue officials in charge of tálukás and divisions of the districts, owing to frequent transfers, greatly needed the continuous assistance of the stationary staff of the Agricultural Department, especially in the infancy of the scheme, when the precise responsibility of the officers of the two controlling departments had not become fully defined and understood. I fully acknowledge the cordial support which I have received from the Collectors. But the fact remains that the work done by the Inspectors and the district agricultural staff was far from satisfactory. It could not be otherwise. But, on the other hand, the delay in Mr. Price's transfer was compensated for by the due completion of the important work on which he was engaged,—which resulted in an earlier completion of the settlement of a portion of the Belgaum District and thus the timely introduction of the revised rates.

7. I have referred to the cordial support received from Mr. Stewart in the matter of the transfer of one of his best officers, and I desire to place on record here the arguments adduced by Mr. Stewart, which fully corroborate those which I put forward, and give succinctly the important duties devolving on the Agricultural Department in the maintenance of the Survey Record :—

> The duties which, according to the latest development of the Government programme, devolve on the Director of Agriculture, are considerably in excess of those which were contemplated when that officer was first appointed, and which were arranged under seven different heads in Government Resolution No. 4576 of 16th June 1883. Owing to the decision of Government to disband gradually the special establishments now entertained for the field operations of survey and land valuation, and to maintain in future a permanent establishment under the Director of Agriculture to record from time to time all necessary changes in the survey record and maps, the entire survey and settlement papers of two districts in which field operations have been completed have been made over to the Director, and he is required not only to 'organize and maintain the village records,' but he is entrusted with the duty of keeping survey maps corrected up to date, altering *ákárbands* and settlement registers as necessity for alteration arises, and maintaining those papers upon which the revised rates will be ultimately fixed. As time goes on, other districts will be entrusted to him in the same way, until finally the present Survey and Settlement Department will be merged into the permanent establishment which it is proposed to entertain, and to which a variety of duties are to be entrusted, of which those connected with revision of settlement will only form a part In the Dhárwár and Bijápur Districts the Director has already been provided with a strong establishment of Circle Inspectors, but he now feels the need of superior assist-

ance in the matter of supervision, and having his hands full of miscellaneous duties finds that he cannot devote the necessary time and attention to the details of the most absorbing and most important of all the duties which have yet been assigned to him. Mr. Ozanne's request for aid appears to me very reasonable. It was contemplated by the Famine Commission that an officer of the rank of a Deputy Collector should be assigned to each district, and one survey officer for two large districts is certainly not more than will be requisite for the proper carrying out of the scheme. It is, of course, very inconvenient for me as Survey and Settlement Commissioner to spare an Assistant Superintendent of Survey at a time when there is great pressure of work, and a difficult programme is to be carried out for the completion of which I feel myself personally responsible, but none but a survey officer would be useful to Mr. Ozanne at the present juncture, and it is, therefore, absolutely necessary that some sacrifice should be made to help him. (Mr. Stewart's letter to Government, No. 2239, dated 30th November 1885, para. 2.)

8. The duties of the Circle Inspectors were shown in detail in the last Report (para. 17). The provisional Rules for their guidance have now been finally revised, and sanctioned by Government. In them the results of the revision of the Manual of Revenue Accounts have been incorporated, and considerable modifications in the distribution of the Circle Inspectors' time among the various duties assigned have been made. The most important of these should be noted.

1. The division of duties between the regular staff of the Mámlatdár and the Inspectors has been made more precise, in order to check the tendency that had already shown itself so strongly of the Mámlatdárs to stifle all progress by utilizing the Inspectors on miscellaneous enquiries.

2. The annual inspections of boundary marks, crops and waste land instead of being separately made, a plan which caused much loss of time in travelling, will be made contemporaneously in the four months ending with the close of February.

3. By this means the interval between that time and the rains will be devoted specially to a complete inspection of the marks of every field, in order to bring the map up to date.

4. In June the Circle Inspectors at the táluka office will compile under the direction and supervision of the Mámlatdár the agricultural returns of the táluka, so that they may be shown in my Annual Report.

5. In July and August the census recorded by the village officers yearly in June will be checked, and the corrected figures will be available for the General Administration Report of the Presidency and for transmission to the Secretary of State.

6. In September the compilation of the census returns at the táluka head-quarters will be made by the Circle Inspectors.

7. In October, miscellaneous work will be prosecuted. This will chiefly consist in the disposal of cases of dispute and the like, which have not been disposed of in the travelling season.

Thus the time of the Inspectors is fully occupied. It stands to reason that if diversion from set duties were not promptly checked, the regularity and value of the work would be seriously impaired.

9. I regret that in Dhárwár the reduction of one Mámlatdár's Kárkún in each táluka has necessitated a temporary addition to the duties of the Inspectors. Application for the restoration of the reduced hand was made by the Collector and supported by the Commissioner and myself. Financial pressure came in the way, and thus an infringement of the principles on which the staff was organized has arisen.

10. The charge of each Circle Inspector varies with the density of population, physical features and the number of separate villages, as the following table will show :—

| Districts. | Number of Circle Inspectors. | Average Monthly Pay. | Average Charge. | | | |
|---|---|---|---|---|---|---|
| | | | Area in Square Miles. | Population. | Number of Villages. | Cultivated Area in Acres. |
| Dhárwár ... ... ... | 40 | 30 | 116 | 22,638 | 33 | 48,535 |
| Bijápur ... ... ... | 39 | 30 | 114 | 15,962 | 25 | 57,067 |

Full figures are not available to show the exact extent of the inspection and test carried out during the year. Suitable forms have been prescribed in the new Rules, which will supply the required information. I made a rapid tour in Bijápur in January, and, as far as I could judge, the Inspectors were doing their work honestly and well, though the people are not yet reconciled to the work of the new staff, and show little co-operation.

### A.—Survey Work.

11. I have, however, full figures to show the amount of survey work performed by the Circle Inspectors :—

| No. | Classes of Cases. | Dhárwár. | | | | Bijápur. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Arrears on 30th September 1885. | New Cases. | Disposed of. | Arrears on 30th September 1886. | Arrears on 30th September 1885. | New Cases. | Disposed of. | Arrears on 30th September 1886. |
| 1 | Partitions of land under decree of Court ... ... | 2 | 20 | 16 | 6 | ... | 7 | 5 | 2 |
| 2 | Sub-divisions on application of occupants duly sanctioned ... ... ... | ... | 3 | 2 | 1 | ... | 2 | 2 | ... |
| 3 | Disputes necessitating re-measurement of fields ... | ... | 15 | ... | 15 | 2 | 29 | 22 | 9 |
| 4 | Disputes requiring fixing of marks by the field books. | 30 | 67 | 36 | 61 | ... | 31 | 14 | 17 |
| 5 | Encroachments ... ... | 5 | 130 | 55 | 80 | 5 | 84 | 64 | 25 |
| 6 | Measurement of alterations caused by alluvion and diluvion ... ... ... | 7 | 19 | 11 | 15 | ... | 59 | 33 | 26 |
| 7 | Measurement of land required for public purposes— | | | | | | | | |
| | (a) Extramural burial grounds ... ... | 46 | 33 | 50 | 29 | 7 | 33 | 28 | 12 |
| | (b) Tanks ... ... | 15 | 18 | 13 | 20 | ... | ... | ... | ... |
| | (c) Roads ... ... | 7 | 12 | 8 | 11 | 1 | 29 | 20 | 10 |
| | (d) Dharmashálás and other public buildings | 2 | 10 | 3 | 9 | ... | 4 | 3 | 1 |
| 8 | Measurement of land for building sites ... ... | 11 | 31 | 26 | 16 | ... | 51 | 44 | 7 |
| 9 | Reclassification of survey numbers ... ... ... | 1 | 4 | 2 | 3 | ... | 3 | 2 | 1 |
| 10 | Miscellaneous ... ... | 28 | 142 | 87 | 83 | ... | 118 | 82 | 36 |
| | Total ... | 154 | 504 | 309 | 349 | 15 | 450 | 319 | 146 |

In Dhárwár in the previous year the arrears were reduced from 192 to 154, though, during the year, 175 new cases arose. In the year under report, 504 new cases arose and 309 cases were disposed of, as against 213 of the previous year. In Bijápur the new staff entered on its work with very few outstanding cases. This was due to the previous deputation of 15 measurers, as noted in para. 4 of last Report. The number of arrears in both districts is large, chiefly because of the absence of due supervision. I personally made arrangements for the clearing off of arrears at a recent visit to Dhárwár, and Mr. Price hopes to dispose of all before the commencement of the fair season. Some of the cases, *e. g.*, of tanks and roads, are very complicated and difficult. A marked feature is the large number of encroachments detected by the new staff—an evidence of its necessity. Untrained Bhág Kárkúns could keep no check on encroachment, and numerous cases have come to light where the encroachment is as old as ten years. The work of measuring off burial grounds has progressed

satisfactorily. The remark just made regarding encroachment cases also applies to those of alluvion and diluvion.

12. Another very important work has been commenced. This is the work referred to in para. 10 of last Report—the thorough inspection of all the marks of each village in turn—to bring up the village map to date. The Inspectors are not all trained measurers, and, in order to prevent confusion and to make the best use of the supervision available, I was obliged to collect the Inspectors of each táluka into one selected village of the táluka. Insufficiently trained men had thus a good opportunity of learning their work. The inspection thus has been completed in 20 and begun in 7 villages of both districts. The month of May should have been devoted to the work, but, owing to the delay in posting the notification required by law and to the difficulty of obtaining labour and in some instances to the opposition on the part of the people, due progress has not been made. The new Rules regarding recoupment of the permanent advance sanctioned for the purpose, and the settlement made in the matter of forms required by the Collector's account office, and, lastly, the preparation of a special form of notification—all points brought out by the experience gained—will facilitate the work in future.

It has been found that redundant marks, cancelled at the time of the Revision Survey, are still kept up through ignorance or negligence. The removal of these marks is enjoined on the Inspectors, who are authorized by a ruling of Government to cause them to be removed by hired labour on default of the occupant. It has, moreover, been found that there exists a large number of intermediate mounds on the boundary lines of fields, which though erected by the Survey are not required by the most recent rules of that department. Thus whereas an intermediate mound was raised at intervals of 10 chains along the line of boundary, later experience justified the increase of the interval to 20 chains. Some villages were demarcated according to the old rule and some according to the recent one. Uniformity is very desirable, and the up-keep of marks should be reduced to a minimum in the interests of the people and of the supervising staff. The revised Circle Inspectors' Rules therefore prescribe that marks not cancelled at the Revision Survey, but found to be unnecessary by the latest rules, should be removed at the complete inspection, provided the occupants agree in writing and provide the necessary labour. An opportunity is thus given to the occupants to lessen their responsibility in the matter of boundary marks. It remains to be seen how far they will avail themselves of it. No authority is given in this case to the Inspectors to remove redundant marks at the cost of the occupant.

### B.—Supervision of Village Records.

13. As stated above, I have no figures to show the work done at the annual ordinary inspection of marks to test the work of the village officers, or in the supervision of the cultivation returns and records of vital statistics, or in the check census. All these duties were presumably carried out according to the orders. They are all duties which the old staff of Bhág Kárkúns either wholly neglected or were unable to perform, and there is the satisfaction that the check was exercised by men trained at any rate to be able to do the work, even though I cannot show on paper the extent of the supervision.

The supervision of the work of the Inspectors under this head primarily devolves on the Revenue officers. The orders of Government are very explicit:

> It is clear that if 3 or 4 Circle Inspectors are resident in a táluka with no personal supervision by higher authority except a periodical visit from the Assistant District Inspector, they will virtually be under very little control, and are not likely to work with energy and precision. The Mámlatdár therefore and *a fortiori* the Assistant Collector should carefully watch the performance of their duty by the Circle Inspectors, though of course they will not alter the instructions of the Director. * * * Moreover, it is not by any means intended that the Mámlatdárs and Assistant Collectors should be relieved of any part of the duty which they now perform in personally testing the preparation of statistical records in the villages and making inspections of crops and boundary marks. And the Collectors and their Assistants should on no account allow themselves to think that as certain operations have been placed under the control of a distinct department, they are not any further concerned with them. (Government Resolution No. 2557, dated 24th March 1884, Revenue Department, para. 6).

I have no record of the extent of check and test performed by the Assistant Collectors and Mámlatdárs. Co-operation is essential. I am glad, therefore; that the Collectors have assented to my proposal, that the results of the tests taken by táluka and divisional Assistants should be communicated from time to time by them to Mr. Price, while, on the other hand, in a set of Rules for the regulation of the correspondence between Mr. Price and the officers of the Revenue Department, it is laid down that Mr. Price will, acting as an Assistant to the Collector, submit memoranda showing results of his own tests and those of his subordinates.

14. In one special point the Mámlatdárs appear to have failed to appreciate their responsibility. All the compilation of the village returns at the táluka head-quarters was carried out by the Inspectors, and it was the duty of the Mámlatdárs to supervise the compilation and to submit, from information obtained from the Inspectors who were able to give it, full remarks as to causes of increase and decrease in the crop returns and the figures of the annual census. No such explanatory remarks have been received. The attention of the Collectors has been called to this apparent omission.

### C.—Agricultural Enquiry.

15. Beyond the actual knowledge gained during their regular work, the Inspectors have had their attention by the Rules directed to the principal features of the cultivation of the tract in which they are employed. This experience will be useful when the time comes for directing enquiry to any special subject on which information may be required.

### D.—Recruitment.

16. I must note that the District Inspector of Bijápur has retired on pension, and the District Inspector of Dhárwár will retire at the end of the current month. The Bijápur post is being temporarily occupied by the Assistant District Inspector. As long as the Survey Record of these two districts was in my sole charge it was necessary that the head of the district staff should be a trained surveyor. That necessity no longer exists, since Mr. Price's transfer. Half the Circle Inspectors are trained measurers, and Mr. Price has a sufficiently strong head-quarter establishment in each district for the due correction of the Survey Record. Government has consistently demanded that the connection between the regular Revenue staff and the special branch partially or wholly under the Agricultural Department should be very intimate. Mr. Price requires trained Revenue men rather than surveyors as his District Inspectors. I therefore asked for sanction to raise the pay of the post to Rs. 150, in order to secure the services of selected junior Mámlatdárs or at least of men eligible for Mámlats and with early hope of promotion. Though sanction was accorded, I have not yet found men of the required qualifications. The reason is simply that I cannot yet guarantee that the promotion will run in the regular line. The principle is established that "the new establishment should not be so segregated from other Revenue establishments that there should be no promotion from the one to the other." (*Vide* para. 7 of Government Resolution No. 2557, dated 24th March 1884.) But this is not enough to induce the best of the junior Mámlatdárs to run the risk involved. I have selected one man for Dhárwár, whose promotion in the regular line has been guaranteed by the Commissioner, S. D. Even if such promotion entails reversion to the regular line, I prefer, for the present, to secure, in this the best way now possible, the class of men I require.

### E.—Extension of the Special Staff.

17. I have endeavoured to extend the Circle Inspectors' staff to all districts without the survey element, which (see para. 4) would be added on the departure of the survey. Experience has shown that the extension is very desirable in the interests of improved statistics, and, further that the strength of the staff required can only be ascertained by enquiry. I came to the conclusion, then, that the first step should be the appointment of the District Inspector alone, leaving the formation of his special staff till financial pressure should

be sufficiently relieved to permit of the expenditure required to improve statistics. I considered that the District Inspector alone would—besides ascertaining accurately the staff necessary for his district—be in special charge of the introduction of the new statistical forms (see para. 18) and of the compilation of the district returns. I proposed that the pay of the post should be equal to that of the Revenue Mámlatdár, and made suggestions as to how due promotion should be provided for. The scheme involved an immediate increased expenditure of Rs. 3,800 per mensem. Its features met with approval from the Divisional Commissioners. Government, admitting that the scheme was not in itself unreasonable, thought it desirable to refer it for detailed consideration of the Divisional Commissioners in Committee assisted by the Survey Commissioner and myself. Meantime the restrictions on expenditure due to financial pressure had become even more stringent than when the proposals were originally made. The Commissioners thought, therefore, that the scheme was beyond the field of practical discussion. It remains undisposed of, to be taken up when money is available. Meanwhile all the arguments used by the Commissioners as to the necessity of strengthening the Mámlatdárs' insufficient establishments and all the promises made to the Government of India regarding steps to remodel the staff of supervisors of village statistics, remain unanswered and unfulfilled.

### F.—Village Statistical Forms.

18. Some progress has nevertheless been made in the interest of improved returns of cultivation and other agricultural and economic statistics. The revision of the Manual of Village Accounts and Statistical Forms has been completed by Mr. W. P. Symonds, who was on special duty for nine months in all. The revised forms were introduced from the beginning of the current revenue year (1st August 1886). The Táluka and Huzur portions of the Manual are, as far as statistical forms, ready for introduction, but a good deal is yet to be done in the revenue forms. The benefits of improved forms depend on experience and supervision. The former will be gained, but the latter is barred by want of funds.

It need hardly be said that in the newly modelled statistical forms the fullest consideration has been given to the duty of the Agricultural Department to supply the required data for revision of rates on the expiry of current settlements. New forms have, therefore, been added with this special object. These are :—

1. A register of rainfall.
2. A register of prices of staple products and wages of labour, skilled and unskilled, at the principal market towns of each táluka.

### G.—Examination.

19. The question of the departmental examination of Circle Inspectors (last Report, para. 24) has not yet been settled. It is desirable to await the decision of the Education Commission appointed by Government Resolution No. 1056, dated 9th July 1886, Educational Department, of which I am a member. In the meantime special instruction is given to the Circle Inspectors. The men appointed to the Bijápur District—other than those recruited from the Survey Department—were examined in October 1885. Of 19 in all 4 failed. These last and others, proved insufficiently trained in the survey duties of their work, will be examined by Mr. Price in his tour, and obliged to attend at head-quarters for further instruction if they fail to reach the standard which I have indicated to Mr. Price.

### H.—Degree in Agriculture.

20. (Last Report, para. 25). The progress made consists in the preparation of a proposed curriculum for the degree or license in agriculture by the Committee of Fellows appointed by the University. The course proposed extends over three years, thus bringing it on an equal footing as regards duration with that

of an Art's College. The standard of efficiency has also been proportionately raised. Knowledge will be imparted in the subjects which are most intimately connected with the requirements of the Agricultural Department. Besides higher mathematics, including Euclid, algebra, trigonometry, surveying and levelling, the proposed license demands a sufficiently high test for knowledge in chemistry, botany, agriculture and veterinary science. The chemistry and botany here prescribed are those principally concerned with the farm. The new degree is proposed to be affiliated to the Faculty of Civil Engineering with which it is intimately associated. In connection with this discussion, Dr. T. Cooke, Principal of the College of Science, drew up, in May last, a memorandum inviting attention to the great progress made by America and Germany in the matter of agricultural education, and showing the desirability of adopting a similar course in India, whose chief revenue is derived from the soil. The scheme is under consideration by the University.

21. The subject of selecting Circle Inspectors to go to the College of Science to obtain an agricultural training, referred to last year (para. 26) so much depends on (1) the re-organization or enlargement of the College of Science on lines similar to those laid down in Government Resolution No. 3E, dated 15th September 1886, on technical education, and which I have long advocated, and (2) on the establishment of a degree in agriculture, that I do not think at present further action is desirable.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

22. The task of preparing district accounts set by the Famine Code has been undertaken by me, as stated in last year's Report (para. 29). Most of the Collectors have furnished information on the set points. The Dhárwár account is ready with a carefully prepared map; and though the plan, on which this sketch has been modelled, cannot be fully followed in other districts till the Revision Survey is introduced, the accounts for all districts will be rapidly made up from the reports received and from all available information from published reports and from old records. The Dhárwár account will be submitted shortly through the Divisional Commissioner. The materials carefully collected by Mr. Krishnaráv Narsinh, one of the trained men of the Gazetteer establishment, proved very useful to me in writing the summary. The more elaborate "Agricultural District History and Manual" will, as has been intimated, be a work of time (last Report, para. 30). The Dhárwár draft is in Mr. Price's hands.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

23. Special provision has been made in Chapter VI. of the Bombay Famine Code which fully describes the system under which the collection of the revenue from land in precarious tracts is regulated. By that system, Collectors are authorized at their discretion to suspend revenue instalments when an abnormal failure of the harvest has been ascertained. The suspended revenue is, subject to enquiry after the temporary distress has ceased, either collected or remitted. The principles on which remission is finally granted, are fully laid down in the Code, and need not here be referred to. When collection is ordered after enquiry, the Collector is again empowered to fix instalments to prevent pressure.

## IV.—MEASURES OF PROTECTION, INCLUDING—

*(1) Fodder Reserves and Arboriculture.*

*(2) Extension of Communications.*

*(3) Irrigation.*

24. As usual, I will confine myself to questions of special interest to the Agricultural Department,

## (1) *Arboriculture.*

### A.—Ba'bhul—its value as a dye.

25. The reply from the Secretary of State regarding the consignment of pod shells of the *bábhul*—Acacia Arabica—has been received. (Last Report, para. 33). They were submitted to experts for valuation, and the opinions were published in the *Government Gazette* dated 29th October 1885, pages 1240-1242. Mr. T. Wardle thinks that as a dye the substance has little value. It produces only a fawn dye. But it has properties as a mordant, and its value in dyeing arises from its contained amount of tannic acid. This both helps to form a black with iron salts and to brighten and fix some other dyes. Compared with the price of sumac, £ 16 per ton, Mr. Wardle thinks that the pod shells should fetch £ 9. He throws out a suggestion that the tannin should be extracted in India from not only the pods, but from the bark and even the branches. Mr. W. N. Evans, another expert, states that the amount of tannin extractable is more than 25 per cent, which is the amount obtained from balonia. Mr. Wardle estimated the extractable percentage of tannic acid at 10·26 per cent., equivalent to 15·39 per cent. of tannin, as compared with 18 to 20 per cent. from sumac. Mr. Evans points out the advisability of gathering the pods ripe, to facilitate the separation of the seeds, which make up 60 per cent of the seed pod and contain no tannin. Other experts declare that the material is not rich in tannin. The valuations of the pod shells vary from £ 9 to £ 10 per ton. It will be remembered that in the note received from the Government of India in 1884 the dry legumes (*minus* seed) were valued at £ 40 per ton, but even at the reduced estimate the extraction of tannin would probably pay.

### B.—Ba'bhul Plantations.

26. District reports have been received. (Last Report, para. 33.) Násik is the only district where grants of land on favourable terms for the purpose have been made. In the Chándor Táluka a field of 3½ acres, assessed at Rs. 11, bounded by a *nála* and so subject to frequent flooding and on that account waste for many years, has been given out for bábhul planting only, at a reduced charge of 8 annas. Two other similar grants have been made. All these cases are in the right direction. From parts of Gujarát it is reported that there is no waste land, or that the bábhul abounds. In the Southern Marátha Country it is said that the tree abounds, and that no applications for grants under the Resolution have been made.

Though these facts and others are true, I contend that there is ample and useful scope for encouraging the growth of the bábhul in good soil, and in special bábhul plantations. Besides the possibility of a profitable export of tannin, it is in other respects a tree of great utility, provided it is confined to set areas. I am beginning an experiment at the Bhadgaon Farm which I think will prove its value. This experiment consists in sowing bábhul on carefully cultivated and good land, in rows 12 feet apart. Between the rows cotton has been sown. The bábhul thus gets the benefit of the bullock-hoeing for the cotton. Next year an early crop will be taken. After that the land will be left to bábhul, and will yield a profit in yearly thinnings. It remains to be seen whether it will pay best then to clear away the bábhul, or leave it to grow. If left, the land will, when the bábhul is high enough, yield good grass. Such a bábhul reserve close to a village in the dry black-soil plains of the Deccan and Southern Marátha Country would give a good profit, and I think that the design of the Resolution is that owners of *occupied land* should thus be induced by suitable remissions of assessment on the land so devoted to bábhul to grow the tree. The injury done by bábhul to cultivation when grown as a road-side tree or among other crops will be discussed later on. This all tends to show that the proper and profitable use of the tree is secured by confining it to set areas. It has a known capacity for taking up salt from land which shows a tendency to infertility from an excess of salt. In the Don Valley, where reh or salt efflorescence sterilizes land, this growth of bábhul was a common practice when land assessments were lower and when land could be thrown up for a term of years with the certainty of its recovery when required. The Resolution shows how

under present conditions the same end may be obtained. The Resolution is not intended to apply to the Konkan, where bábhul does not grow well, and where other trees are abundant, but to black-soil districts.

### C.—Trees on Road-sides and Canal Distributaries.

Government Resolution No. 95 W. I.—210, dated 5th May 1885, Public Works Department.

27. In 1885 the advisability of planting trees along canal distributaries was fully discussed, and Government in the Irrigation Department ruled that such planting should be discontinued. In exceptional cases, where the owners of land traversed by the distributaries express a wish, in writing, for the planting, it will be allowed, but even then it is enjoined that careful regard shall be paid to reasonable preferences as to the kinds of trees to be selected.

The reports of the Executive Engineers and of other officers, to whom the question was referred for opinion, contain much valuable information as to the fairness of the objections raised by the rayats to having trees in the midst of cultivation. This objection was strong enough to induce the landholders in several districts to offer the land required for distributaries without compensation, provided a guarantee were given that no trees should be planted. The objections were supported by the facts alleged and generally admitted, that trees harbour birds which damage crops, that crops are injured by the shade of trees and by the spreading of their roots, and that low branches prevent the passage of the plough and harrow. As to the damage done by birds, there is, no doubt, a partial compensation in that the birds do good as well as harm by destroying caterpillars and the like. But this compensation is not sufficient inducement to the owner of any particular field. He can hardly be expected to be ready to provide harbour for birds so that his neighbours may be benefited, and he may well urge that he will receive just as much benefit from the destruction of insects where there are no trees.

28. The arguments against tree-planting along canal distributaries apply fully to trees planted along road sides, and along the boundaries of fields elsewhere, and among cultivation. An immense deal of trouble and money has been expended by district officers to overcome the apathy and prejudices, as they were supposed to be, on the part of the rayats in this matter. The arguments used are that in the black-soil plains, where fuel is scarce, the rayat by growing trees along the field boundaries will provide fuel and wood for the plough, and thus be able to use the manure of his cattle for its legitimate purpose—enriching the land, or rather returning in part to it the fertilizers extracted by the crops.

Again, it is urged that belts of trees in these bleak plains will check the furious winds which in their unimpeded passage over standing crops do great harm.

The first point to notice is, that there is evidence on which the degree of damage done to cultivation by different trees can be fairly indicated. Fruit trees, which give a good return annually to the planter, further offer compensation for damage done. The standing orders regarding road-side trees and trees on field boundaries are to be found in Nairne's Hand-book. From these it will be evident that the injury done to cultivation was by no means overlooked in the orders to Revenue officers. Thus advice is given as to selection and instructions as to the authority the Collector should exercise to grant sanads to assure the planters of fruit trees the enjoyment of the fruit. In the same hand-book advice is given as to the suitability of different trees for different soils. There is thus abundance of guiding rules, but I am inclined to think that the merits of trees to make a good avenue have, in practice, carried the day against the demerits of the same trees when their effect on crops is considered.

29. I find that at the Bhadgaon Farm, some years ago, the then Collector, Mr. L. R. Ashburner, who above all others made himself conspicuous in his endeavours to encourage road-side plantation and the growth of trees on field boundaries and in the midst of cropped land, ordered an experiment to be made at the farm. A field was chosen through which a canal distributary passed. The

borders of the field and both sides of the channel were planted. The object of the experiment was to gauge the weight of the objections raised against the extension of such planting.

Before I give the evidence afforded now by this experiment, I will quote in detail the remarks made by the Superintendent of the Farm :—

83. *Damage to crops.*—It is much to be desired that the laying down of bábhul plantation should become sufficiently common to meet all demands for field implements and fuel, so as to admit of every bábhul tree being cleared away from the proximity of cultivation. The enormous destruction caused principally to cold-weather crops by trees, especially when the rainfall happens to be short, does not seem to be generally understood, unless amongst cultivators themselves.

84. Under the orders of the late Collector of Khándesh, W. H. Propert, Esquire, I made this a subject of special study during my tours in the district last cold weather, and have gathered together much information, only a piece of which need be given here.

85. It was found that *linseed* suffers by far the most severely from shade, after that *wheat* (*vide* para. 38), and, lastly, *gram*. The trees named in the margin are those usually found on field boundaries and road-sides, and are arranged in order of their destructiveness. While the first is by far the most mischievous, the last on the list is the least so, and, therefore, the most fit for road-side planting; where cultivated fields come in the way, the owners of such fields are greater sufferers from the effects of shade than is generally suspected. I was fortunate in being able to point out numerous such fields to Mr. Propert, Collector, and Mr. Ozanne, Director of Agriculture,—to the former in the best rabi portions of Khándesh, to the latter also in parts of the Poona District. Both gentlemen were much interested, and desired that this mention of it should be made in the Farm Report.

Bábhul (Acacia Arabica).
Tamarind (Tamarindus Indicus).
Siras (Acacia speciosa).
Mango (Mangifera Indica).
Nim (Azadirachta Indica)

86. It is curious that this sterilizing influence of bábhul shade seems to be most active when the sun is only slightly above the horizon, or, as cultivating people express it, at 8 in the morning and 4 in the afternoon. Thus a tree in the middle of crop destroys two triangular patches, one to the north-west, the other to the south-east, the height of each triangle from base to apex being usually equal to about twice the height of the tree.

87. The average of a number of measurements made with 35-feet trees, worth Rs. 2 each, exhibits a destruction of 240 square yards or 2 gunthás of crop, which, at the moderate estimate of 8 annas per guntha, shows that the tree, so to speak, eats off its head once every two rabi crops or once in four years. It is for this reason that the large bábhuls are generally to be seen with their branches hacked off close to the trunk.

88. Many explanations have been suggested regarding the evil influence of trees, and I also have formed an opinion of my own, but do not care, for the present, to go beyond mere observation, my object being to prove that in cutting down their field bábhul and carting it for sale to the press factories and spinning mills the cultivators are carrying out a much-needed agricultural improvement, and should by no means be interfered with. Before the days of forest conservancy the practice would have been injudicious, but is now only the ordinary operation of cause and effect.

The results of the special experiment referred to above may now be given.

There were only two fields in the farm moist enough in the year of deficient rainfall to have any chance of producing a fair crop of wheat without irrigation. One gave a yield of 450 lbs. per acre. The other, surrounded by trees and intersected by a channel with both sides planted with trees, gave an average crop of only 132 lbs., though 8-guntha plots selected in the centre of the field away from the influence of the trees showed a yield equivalent to 425 lbs. and 475 lbs. per acre.

The field is 10 acres. The loss due to trees was, therefore, taking 450 lbs. per acre as the crop which would have been produced but for the trees, no less than 320 lbs. per acre of grain, besides straw (1,000 lbs. per acre).

This field was sown by the ordinary labourers of the farm. The seed did not germinate in the land under the influence of the tree shade. It was again sown by Mr. Stormont himself twice. The seed sprouted, but the seedlings rapidly died off, and there was no crop close to the trees, and little even at a distance of 2 chains.

30. I personally made an experiment in the Bijápur District. A wheat field adjoined a large row of bábhul trees in the compound of a travellers' bungalow.

The trees were well grown. The soil was excellent black. The season was very favourable to wheat. The crop was not touched by rust or other disease. The cultivation was very good. I cut portions of the crop 1, 2, 3 and 4 chains from the boundary of the field, leaving the headland 6 feet wide out of the measurement, and then took an experiment on the crop, beginning at the end of the 4th chain. The results were as follows :—

| | | | | Per Acre. Lbs. Grain. | Lbs. Straw. |
|---|---|---|---|---|---|
| Crop between | 0 & 1 | chain from headland | ... | Nil. | Nil. |
| Do. | 1 & 2 | do. | ... | 112 | 180 |
| Do. | 2 & 3 | do. | ... | 96 | 310 |
| Do. | 3 & 4 | do. | ... | 138 | 450 |
| Do. | 4 & beyond | do. | ... | 712 | 706 |

It is clear from these figures that the influence of the trees extended to 4 chains (132 feet) from the high bábhul trees.

I noticed, two years ago, a striking case. In Dhárwár a road running due south was lined on both sides with bábhul trees. There was no crop in the cotton field close to the trees, and the damage extended at least 3 chains from the trees.

31. The Executive Engineer for Irrigation, Sátára, noticed that along the Krishna Canal, where the bábhul has grown well, the land lies uncultivated within 50 feet of the boundary hedge. This officer notices that the bábhul damages crops by an exudation which drops from the trees, and blackens the soil all around. But the injury cannot be attributed entirely to this cause, for the influence extends far beyond the immediate neighbourhood. The Survey Commissioner called attention to the advisability of ascertaining the order of harmfulness in which trees should be ranged. He charges the fig tribe with doing great injury by their roots running riot underground, and gives an instance where the soil was permeated by the roots of a large *pipal* (Ficus religiosa) 60 feet from the trunk. The Commissioner, N. D., Mr. Sheppard, does not admit the justness of the great objection to the bábhul in Gujarát, but states that he has had to deal with applications for remission on account of the shade of *vad* (Ficus Indica) trees along public roads.

32. I think that Mr. Stormont has rightly placed bábhul as the chief enemy to cultivation. His remarks as to the degree in which different crops suffer and as to the influence of season on that degree, are very apt, and are fully borne out by my own observation.

The sum and substance of my whole study of the subject is that bábhul should not be planted nor allowed to grow either as a road-side tree, or on canal banks, or amid cultivation; but that it should be relegated to separate areas. District officers have the power of thus encouraging its growth. I need only refer to para. 26 of this Report. Dr. Gibson, whose advice as to the selection of road-side trees has been considered worthy of being accepted as the standing order on the subject, declares that the imperfect shade of bábhul is a drawback against its utilization as a road-side tree, but he adds that the "ease with which it is raised and its hardiness in growth render it desirable for planting or for being kept up when it springs up naturally, as is often the case, near the other trees on the road line." In the standing orders, Government directs that "bábhul should *never* be *planted* as a road-side tree, except where no other trees will thrive." "It affords a very imperfect shade," but the further direction is given "that bábhul should be tolerated when it springs up spontaneously in soil well suited for its growth, for it is better than nothing," and that "it is not intended that bábhul should be cut down to make room for other trees."

I place on record my conviction that, to use Mr. Stormont's words, in cutting down field bábhul the cultivators are carrying out a much-needed agricultural improvement, and I trust that these remarks will lead to a modification of the standing order that bábhul should be *tolerated* when it grows spontaneously on road-sides, and to a stricter reiteration of the order that it should not be planted either on road-sides or canal banks.

I have noticed numerous cases where bábhul springing up spontaneously is doing great harm to nim and other better trees, and the Collector of Khándesh

has wisely assented to my proposal to thin out bábhul thus obstructing on the road from the Bhadgaon Farm to the Páchora Station. Bábhul springs readily in black soil, especially on loose banks, and if it is not cut out will rapidly increase the injury it now does to cultivation as time goes on.

I must here notice that bábhul and other trees planted on roads running east and west do very much less harm than when the road runs north and south. Whatever other injury bábhul may do, its shade is the chief cause of the harm done. I have not made any exception for road-side spots which do not adjoin valuable cultivation, simply because in such bábhul will not grow.

### D.—Ra'b Experiments.

33. These have been heretofore noticed under this head. The decision on the ráb question has been left to the Forest Commission. I have conducted personally careful experiments at Karjat for two years, though last year the experiments were also conducted in four other places. Full reports have been submitted to Government, and on the reports careful reviews and criticisms have been recorded by Revenue and Forest officers. The question—whether it is feasible to carry out the suggestion of the Commissioner, C. D., to select areas for ráb reserves, to plant them, and leave their supervision to the Forest Department—is one that will be considered by the Forest Commission. It would, therefore, be inappropriate for me here to notice the subject further.

Report for 1883-84, para. 13.

### *(3) Irrigation.*

34. The subject of well irrigation was treated at length in the last Report (paras. 35-42). It was there recorded that in the opinion of the officer—specially deputed to enquire—no water-lift yet tried can show superiority to the common *môt*, or leather bag, such as would warrant its supersession. I have during the past season visited a tract where the *môt* is not suitable and where it cannot compete with the Persian wheel. I refer to the garden tracts of North Thána. This tract is exceptional. The depth of water in the wide wells is generally too little to admit the leather bag. The common pattern of the Persian wheel is extremely rude, and demands a large amount of valuable timber for its erection. The rise in value of timber has induced attempts to economize. Two new patterns are under trial. One, the invention of Mr. Rámchandra Náráyan Maráthe, of Bassein, and another, a modification of the chain pump devised by Mr. D. V. Dándekar, of Máhim, are both attracting attention. Both are estimated to reduce the initial cost of the construction of the wheel and its platform from Rs. 400 to about Rs. 100. The people of Bassein subscribed Rs. 100 to enable Mr. Maráthe to take out a patent for his invention. With their concurrence, I asked Government to award a sum of Rs. 500, on condition that the people of Bassein should be permitted the free imitation of the improvement, which is only of limited application. Government, however, ruled that the inventor should not be debarred from applying for a patent, and that it was unlikely that imitation would be impeded by the small extra cost which a patent would involve, if the invention were proved really useful and worthy of imitation.

35. The pulsometer worked by steam has been tried privately at Umreth in the Kaira District. The outlay, over Rs. 1,500, is considerable, and the machine has, as far as I have been advised, not yet fulfilled expectations.

36. Drainage schemes in the Ahmadabad and Broach Districts have received the attention of the Irrigation Department; and, though I have no immediate connection with them, the subject is one of considerable interest to the Agricultural Department, and a short account is, therefore, recorded in this Report.

In recommending the drainage scheme for Viramgám, the Chief Engineer for Irrigation urged: "That, owing to defective drainage which at present obtains, it is reported that 6,656 acres of land have been thrown out of cultivation, representing an annual loss of Rs. 7,573. Of these, 3,070 acres are in occu-

pancy, and the assessment on this area, Rs. 3,293, represents the annual amount of remissions on account of the defective drainage, while 2,486 acres of Government land assessed at Rs. 3,180 and 1,100 acres tálukdári assessed at Rs. 1,100 are lying waste." The scheme comprised the excavation of channel and the construction of waste weirs and regulator. The total cost of the scheme, including works, establishment, tools and plant, was estimated at Rs. 78,832, which would bring in a return of about 10 per cent on the whole outlay. Both the Collector and Commissioner supported the project. The plans and estimates were sanctioned by the Bombay Government in the Public Works Department, who admitted the urgency of the work, which "will not only secure a considerable revenue which has now to be annually remitted and bring again into cultivation a large area of land now lying waste, but will materially improve the health of the large and important town of Viramgám, which has for many years suffered from the accumulation of rain-water." As no provision was made for the work in the budget for 1886-87, and as such a large sum could not be made available by re-appropriation from any other item in the budget, the Government of India was requested to make an additional grant of Rs. 79,000 under Ordinary Irrigation Works when passing orders on the budget estimate for 1886-87. No additional grant was made by the Government of India for want of funds for the purpose.

Government Resolution No. 34 W. I.—75, dated 20th February 1886, Public Works Department, Irrigation.

Government Resolution No. 45 W. I.—117, dated 24th March 1886, Public Works Department, Irrigation.

In Broach, attention has been at different times drawn by the Revenue officers to the injury to the lands in the district through want of proper drainage to carry off the flood waters, and in 1875 rough estimates were submitted by Mr. Gregory, but on these no action was taken. In 1884 the subject was again pressed on the attention of Government by the Commissioner, N. D., and surveys were sanctioned in Government Resolution No. 172 W. I.—367, dated 11th August 1884. It appears that the natural drainage channels have by degrees silted up, which has led to the lands remaining water-logged during and after the rains, with consequent annual damage to crops. A loss of revenue, amounting to Rs. 15,083, has resulted, while necessarily also the sanitary evils accompanying bad drainage have arisen. Plans and estimates for seven drainage channels, costing in all Rs. 1,78,120, were prepared. The financial result will be a return of 8·47 per cent. on the outlay. The Revenue officers strongly advocate the adoption of these measures. The work was sanctioned as an agricultural work by the Bombay Government, who are fully alive to the great benefit likely to be derived from it, judging from the success which has attended similar works on a smaller scale which have been carried out in other parts of Gujarát. As in the case of the Viramgám drainage scheme, the Government of India refused to make an additional grant in considering the budget estimates for 1886-87, owing to want of funds for the purpose.

Government Resolution No. 35 W. I.—76, dated 24th February 1886, Public Works Department, Irrigation.

Government Resolution No. 45 W. I.—117, dated 24th March 1886, Public Works Department, Irrigation.

Of the seven drainage channels in Broach the urgency of the Amanpur-Nadiád channel was pointed out by the Commissioner, N. D., in reference to the outstanding balances and waste lands in the Jambusar Táluka in 1884-85. These and the steady decrease in the cultivated area, the Commissioner attributed to defective drainage. Government in the Public Works Department have decided that the channel in question should be the first of the systems to be undertaken next year after making provision for the Broach drainage scheme in the budget estimates for 1887-88.

Government Resolution No. 71 W. I.—171, dated 7th May 1886, Public Works Department, Irrigation.

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

### *A.—Experimental Farms.*

37. The annual reports were distributed early in September. A small delay arose from the addition of a map to the Haidarabad Farm Report. The

Bhádgaon Farm has been partly remeasured by the surveyor who was attached to my office, in order to bring the map to date. Since the original survey, alterations in area, due to buildings, roads, and water channels, have arisen, with the result that the acre yield found by dividing the gross outturn by the registered acreage was inaccurate. The map will accompany next year's report.

38. I have not visited the Haidarabad Farm since 1884; but I was able to pay 3 visits since the date of my last report to Bhadgaon, remaining a week in the most interesting cultivation period. The condition of the farm is greatly improved. At Bhadgaon there has been no change in the *personnel* of the supervising staff. Mr. Stormont has worked with his usual energy, and Mr. Dádina, his Assistant, has gained experience, and is more expert and accurate in the conduct of experimental work. Mr. Navroji as unpaid Assistant has shown zeal. A Kunbi apprentice deputed by the Ahmadnagar Local Fund Board after some practical experience on the High School Farm, has given satisfaction. There is room for more apprentices, and the example set by Ahmadnagar is worthy of imitation.

39. I have reserved my review of the operations of the farms for these pages, to save repetitions and to contrast the results of similar experiments conducted on the Government farms and elsewhere.

### The Season and Financial Results.

40. At Bhadgaon another bad cotton year has been added to an already long series. The rainfall was short and unseasonable. Cotton was not sown till the middle of July—5 weeks too late for the best results. A long break from the middle of August—lasting nearly a month—was injurious to all crops but jowári. The late September rain was full, but an injuriously heavy fall was experienced in December. Cotton, bájri and dry wheat were poor. Tili was fair. The jowári crop was excellent. Cotton is the staple, and no amount of success with other crops can make up for its deficiency. Moreover, on the farm the delicate and uncertain exotic American is grown with a certainty of greater risk and of less profit than could be obtained by cultivating the indigenous variety, to keep up as far as possible a supply of seed to be available when the tide turns in favour of the long staple.

| Year. | Inches. |
|---|---|
| 1885-86 ... | 21·40 |
| 1884-85 ... | 28·11 |
| Average from 1880 ... ... | 31·89 |

Exclusive of the pay of the Superintendent (Rs. 4,500) and his travelling allowance (Rs. 413), which latter is only chargeable for convenience of account against the farm, the deficit amounted to Rs. 2,341 against Rs. 1,400 of the previous year. The up-keep of the Government breeding herd (Rs. 1,177), long located at the farm, has, however, been for the first time charged against the farm. The transfer of the herd to the farm account is rather an investment than a loss, for it will eventually more than repay its keep. The area of pure experiment being considered, I consider the cost of the farm very reasonable.

41. The Haidarabad Farm is a very much smaller institution. The pay of the Superintendent is shared by the Economic Garden supported by the municipality. The season was good. A favourable inundation of the Indus and a light and favourable rainfall were the chief features. The deficit was only Rs. 214, though neither is the share of the Superintendent's pay debited, nor that of his Assistant (Rs. 960), whose chief duties are those of Agricultural Teacher of the High School. Credit is taken for the rent of the land of the old farm at Saláru (Rs. 1,460), a credit only justified by the great cost incurred in bringing the present farm into a suitable condition for cultivation. It must be also noticed that the proportionate cost of permanent improvements at Haidarabad (Rs. 234) and the full assessment of the arable land at Bhadgaon (Rs. 679) are debited.

The land of the Haidarabad Farm is unassessed, and indeed without the large expenditure incurred could not have yielded any rent.

The whole cost to Government of both farms was as follows:—

*Bhadgaon.*

| | Rs. |
|---|---|
| Pay of Superintendent ... ... | 4,500 |
| Expenditure ... ... ... | 10,411 |
| | 14,911 |
| *Deduct* receipts ... ... | 7,657 |
| | 7,254 |

*Haidarabad.*

| | Rs. |
|---|---|
| ½ pay of Superintendent ... | 2,250 |
| Do. of Assistant Superintendent... | 480 |
| Expenditure ... ... | 4,408 |
| | 7,138 |
| *Deduct* receipts ... ... | 4,193 |
| | 2,945 |
| Total Rs. ... | 10,199 |

I trust that the review of the experimental working of the farms will prove that this outlay is justified, especially when no credit is taken for the improved value of the land, which in both cases is very large.

### Experimental Results.

Government Resolution No. 935, dated 4th February 1886, and Government Resolution No. 2520, dated 1st April 1886, Revenue Department.

42. The first point to notice is that I have found it impossible to carry out the letter of the orders of the Government of India regarding the tabulation of results in set forms. In my humble opinion, this order is only applicable to a very limited class of experiments. Seeing the difficulty which Mr. Stormont was experiencing at my visit just after the submission of his report, I undertook to prepare the tabular statement in my own office, but it cannot be done. Mr. Strachan made an attempt; but the tabulation, such as it was, could neither add to the value of the record of experiments in the body of the report, nor to facility for intelligible collation of results in the Central Office of the Revenue and Agricultural Department of the Supreme Government. It is, in my opinion, impossible to make one form of statement fit in with the special requirements of all classes of experiments. Each has its peculiar features, and it is on these that its value depends. The compilation of experimental results, obtained in different localities and under different conditions, is most desirable. I endeavoured in para. 51 of my last year's Report to urge its importance. A digest for information and for guidance is wanted, but it cannot be secured by the mere fixing of a form. I believe the results of all experiments are, in the body of the reports which have been submitted, shown in the most useful and intelligible forms; and these taken with the review which is given below will give the greatest facilities for intelligible compilation. I trust that the failure in responding to the orders of the Supreme Government may have some effect in proving the necessity of the appointment of an officer competent to digest the reported results of experiments received from the various Agricultural Departments. The very formulation of the orders corroborates my contention that a digest is greatly needed.

### Experiments on Manures.

43. *Green manuring.*—Last year, hemp as a green manure showed no increase for wheat, but in the same plot this year sown with cotton the yield was slightly better than that of an unmanured plot adjoining.

44. *Cowdung ashes.*—Last year it was found that gram on plots manured respectively with 30 tons per acre of fresh dung and with the ashes of a similar amount, showed only a small increase in favour of the fresh material. The same plots were this year sown with bájri. The ash manure gave 1,015 lbs. grain and 7,530 lbs. straw; the other, 195 lbs. grain and 2,660 lbs. straw more. Again, other plots manured similarly, though the amount was 20 instead of 30 tons, showed 318 and 348 lbs. of gram with the ashes and 643 and 540 lbs. with the fresh manure, double in the former and nearly double in the latter. Taking this increase with that which the bájri showed above, it is proved that the ashes cannot give nearly as good a result for two and perhaps more years as the fresh dung. But the question remains—is the loss of the use of the dung first as fuel before its use as manure compensated for by the extra profit secured? Mr. Stormont thinks not. His remark is: "The cultivator who applies 30 lbs. of fresh dung to his land, instead of its ashes, gains thereby Rs. 4 worth of grain

at the sacrifice of about Rs. 20 worth of fuel for his domestic hearth." I had to point out an overstatement last year (Report, para 45), and have to do so again now. The above conclusion is unwisely based on the first experiment only. If the calculation is made on the average of the latter two, the gain in fuel will be found, even estimated at the rates used by Mr. Stormont, to be Rs. 13, but that in crop nearly Rs. 10 in one year, with a certainty of still greater proportionate gain the next and perhaps the third. The conclusion also neglects the mechanical and other benefits arising from the application of the fresh dung.

The experiments, however, show the great loss which is occasioned by the neglect of the use of ashes as manure—a neglect which I have observed among cultivators, but I must admit chiefly in tracts where ráb is practised. In these tracts the burning of the manure on the seed-bed is all essential, but it is egregious folly to neglect to use available ashes as a simple manure on the area not seed-bed.

Mr. Stormont has not been able to demonstrate the superiority of well-kept dung over that badly kept. Cowdung cannot be utilized at the best advantage if it is allowed to ferment rapidly and exposed to rain. An admixture of litter is a great preservative of the valuable parts of the manure, and the absence of any litter in the dung heaps of the country is very marked. Cowdung is the most valuable of manures, and if the Agricultural Department by enquiry and experiment and demonstration can prevent loss and teach a better practice, where the local practice is found wanting, it will achieve a great success.

45. *Good and poor dung compared.*—The demonstration of the benefit arising from using the manure of well-fed cattle and relegating that of poor-fed beasts to the necessary fuel supply, using its ashes only for manure, has been made. The plots of gram, above referred to, manured with the dung of ill-fed cattle gave a yield of 540 lbs. of grain and 850 lbs. of straw as compared with 643 lbs. grain and 910 lbs. straw on plots manured with the manure of well-fed animals. Plots manured with the ashes of good and poor manure showed little difference, as might have been expected. I trust that Mr. Stormont will conduct further experiments to clear up the difference of conclusion between us which now exists.

## Tillage as Manure.

46. I have purposely classed the Lois Weedon experiments under this head, for it is a means of substituting extra tillage for manure. It consists in growing wheat (or other crop which repays extra tillage) continuously in belts, with interspaces fallow, but frequently cultivated. At Bhadgaon the experiment has reached its second year. At Haidarabad, owing to the re-division of the farm land, the first stage has been repeated.

| Bhadgaon. | 1885. | | 1886. | |
|---|---|---|---|---|
| | Grain. Lbs. | Straw. Lbs. | Grain. Lbs. | Straw. Lbs. |
| Lois Weedon wheat... | 615 | 650 | 550 | 805 |
| Continuous wheat ... | 800 | 1,210 | 540 | 1,229 |
| Wheat in rotation ... | 956 | 1,962 | 667 | 1,311 |

The continuous unmanured dry-crop wheat is grown as a standard whereby to compare the results of the system under experiment and that usual in the neighbourhood under which wheat is taken in a three-year shift following gram and preceding jowári. All the plots were unmanured and unirrigated. A complication clearly is evident from the unevenness of the various plots. In the *first* year this alone accounts for the superiority of the rotation over the continuous wheat plot. Another disturbing influence is that of season exemplified by the difference in yield in the rotation plots of the two years. The former inequality will disappear after, say, the first course of three years is completed, and the merits of the system will be shown well by the results of the second three years. As it is, some merit is evident, for on the Lois Weedon plots the grain yield

from half the amount of seed is superior to that of the continuous plots, and not far behind that of the rotation plots. The extra cost of tillage is estimated at Rs. 5-10-0 per acre, and the saving is only 35 lbs. of seed. But it may be remarked that the tillage can be done by the rayat when there is leisure from other field work, and that the rates of wages on a Government farm are very high, and that the tillage this year represents the cost of a fertilizer for next year's crop. Moreover, the cost can be reduced when the system is better understood.

At Haidarabad the results were :—

| Haidarabad. | 1885. | | 1886. | |
|---|---|---|---|---|
| | Grain. Lbs. | Straw. Lbs. | Grain. Lbs. | Straw. Lbs. |
| Lois Weedon wheat... | 2,102 | 5,707 | 1,202 | 4,082 |
| Continuous " ... | 2,000 | 5,715 | 1,405 | 5,507 |

These both represent the results of the *first* year, owing to the necessity of shifting the site. The half-sown plot was actually better in 1885 than that fully sown, which points to the suitability of the system for Sind. The rotation plot will not appear till the third year, as provision was not made for having one rotation plot yearly as at Bhadgaon. The wheat is all irrigated at the Haidarabad Farm. It is a question whether the system would not be more profitable at Bhadgaon with irrigated wheat. To test this, I have arranged for a complete set of plots—all irrigated. In irrigated land, manure, too, is a more important question of practical farming, and a system which would enable a rayat to grow wheat continuously without manure would prove very profitable. I may add that the system will this year be tried also with cotton in Sind. Mr. Strachan's practical knowledge of Sind farming leads him to expect good results.

### Use of Pickles to prevent Smut.

47. At Haidarabad there was no smut at all on any crop, owing to the light rainfall. The experiment was, therefore, negative in its results.

But at Bhadgaon a bad smut year has proved the benefit of pickling. A new pickle tried by Mr. Stormont, the carbolic-acid pickle, gave excellent results. An area which produced 2,800 lbs. of grain (jowári) showed only 15 smutted ears; while a similar area giving 3,652 lbs. of grain, the seed not having been pickled, produced 81 smutted ears. Sulphate of copper gave poor results—94 smutted ears for 3,360 lbs. of grain. This, in fact, showed no prevention at all. Urine, as far as the proportion of bad ears goes, gave the best results; but the prevention was worse than the disease, as it killed ⅔rds of the seed right off, and gave a miserable crop. Salt showed 65 bad ears to 5,322 lbs. of grain. The experiments, however, brought into prominence a remarkable fact—that whereas all the experimental plots, even those unpickled, were practically free from smut, the crops of the neighbourhood suffered badly. Mr. Stormont is endeavouring to ascertain whether the result was not due to the fact that the seed of all the plots had been produced from seed pickled for the previous sowing. Mr. Stormont is practically convinced of the merit of pickling, and has all the farm jowári protected by a treatment with carbolic acid before sowing. His recipé is as follows :—

> Spread the grain evenly about two fingers deep over a hard floor, or piece of cloth; then for each bushel or 60 pounds of seed, well mix one fluid ounce of the acid in a quart (½ sher) of cold water and sprinkle over the grain, which should be well stirred to make the distribution even and effective; it is then ready for sowing at once. The price of a 16-ounce bottle of the acid is Rs. 1-4-0, so that the cost of preparing seed enough for an acre is only 1¼ pies.

I recommend its trial by those who have practically experienced the damage done to jowári by smut, and trust that those who do give the pickle a fair trial will report their success or otherwise to me direct.

## Double Cropping.

*(Bhadgaon.)*

48. The continuance of bad cotton seasons demands that the farm should experiment with protective make-shifts. The local custom is to sow cotton wherever possible, and, if the season turns out badly, to uproot it and substitute a millet which can be sown later, or take a *rabi* crop. Mr. Stormont has usually modified this custom by leaving the poor cotton and intersowing it with lines of gram in the *rabi* season. This year he chose a field of poor cotton. He divided a part into 9 equal plots. In three he left the cotton to yield what it would. Adjoining each of these three he ploughed up the cotton and sowed gram, wheat and linseed respectively. Again, adjoining these he left the poor cotton, and sowed the same three crops in lines between the rows of cotton. The results were as follows :—

Linseed intersown among the cotton gave the best result, a clear profit of Rs. 2¼ per acre after charging cost of cultivation and assessment. Gram came next similarly intersown, with a net profit of Re. 1. In all other plots there was loss. With cotton alone the loss varied from Rs. 2½ to Rs. 4. Gram, wheat, and linseed, sown where the cotton had been uprooted, showed a loss of Rs. 7, Rs. 3 and Re. 1 respectively; while cotton with wheat intersown also showed a loss of Rs. 4. The loss so shown must not be considered as a necessary loss in all cases to the native cultivator, for the cost of cultivation, as I have continually to report, is necessarily higher on a Government farm than in ordinary farming. In spite of the shown superiority of linseed with cotton, Mr. Stormont sums up as follows :—

> The relative values of the three principal *rabi* crops for purposes of interculture with cotton may thus be summed up :—(1) *Wheat,* besides being a strong growing plant, choking the cotton and being spoiled by it, in return is also very liable to damage during final picking of cotton and removal of the plant; (2) *linseed,* being particularly susceptible to damage from both shade and insufficient moisture, is not altogether safe ; (3) *gram* with its creeping habit and comparative indifference to shade will usually succeed fairly well under all sorts of conditions, and is, therefore, the best for the purpose.

I agree that the success of linseed was perhaps fortuitous, for it is excessively delicate. At any rate, Mr. Stormont shows that interculture with *rabi* crops is more paying than the local plan of ploughing up the cotton altogether.

## Seeding Experiment.

49. Thin and thick sowing. Linseed and gram were sown at various rates with the object of testing the correctness of local empirical custom.

*Linseed.*—Local rate 12 lbs., but a seeding of 14 lbs. gave slightly better results; while plots sown at the rate of 8 and 10 lbs. were far behind-hand.

*Gram.*—Local rate 40 lbs., which seeding gave a better crop than heavier rates of 50 and 60 lbs., and than lighter sowing at 30 lbs.

In the case of linseed, rust, or a disease resembling it, called bandára, disturbed the experiment, which, however, is of a useful character and extensible to the other staple crops, for in all cases it is desirable that local practice should be made to stand the test of experiment.

## Best Cotton for the Farm (Bhadgaon).

50. The cottons grown are (1) the acclimatized Dhárwár-American, (2) the Hinghangháti from the Berárs, (3) the Varádi, or indigenous Khándesh cotton. A fourth, Nankin, has been experimentally cultivated, though for reasons detailed last year is neither profitable nor desirable.

A direct trial in adjacent plots showed a yield of seed-cotton as high as 532 lbs. with the Varádi, and as low as 175 lbs. with the Nankin per acre. Both plots had been equally and liberally manured for the previous crop. The best field of the Dhárwár-American gave 225 lbs. Hinghangháti yielded 175 lbs.

The comparison between the results on large fields and those on small plots is perhaps hardly fair, and so a careful trial is now in progress—on experimental plots—which will give results on which generalizations will be sound.

Seed Selection.

*(Haidarabad.)*

51. Mr. Strachan has carried on these experiments in spite of the oft-repeated fact that his farm is hardly yet even enough for comparative experiment.

*Cotton.*—On the average the produce from selected seed (1,730 lbs. per acre) showed a great superiority over that of unselected seed (1,205 lbs.), but in one of the duplicate plots the unselected seed was actually better than the other.

The outturn of clean cotton was 37 per cent. in the produce of selected seed, or 1 per cent. higher than that of the unselected seed.

In price the former showed important superiority, being valued by the Chamber of Commerce, Karáchi, at Re. 1 to Rs. 1¼ more than the then average of Sind cotton, while the produce of unselected seed was valued at only 8 annas more. As regards the former, it was said that very few bales equal to it had been received, and even the cleanliness of the latter placed it on an equality with the best bales received. With these results Mr. Strachan must be well satisfied, and Government will be pleased to learn that almost, if not all cotton cultivators in the neighbourhood bought selected seed for sowing from the farm —an example which a zamindár, whom Mr. Strachan met on his tour, followed both as regards selected cotton and selected bájri seed.

At the Bhadgaon Farm, attention is paid to selection of seed, though it has not been made the subject of direct experiment. It has gained appreciation in the neighbourhood, and the greater part of the farm produce is disposed of for sowing—as it should be.

*Bájri.*—Three duplicate plots are sown with seed of three kinds selected in 1876-77, and the selection is made yearly from the best spikes in the three—each variety being kept distinct. Year by year a further selection is made indiscriminately from the three; and there are standard plots sown with seed bought in the bázár. The yield taken as the average of duplicate plots is tabulated thus:—

| Varieties. | 1882-83 Grain. | 1883-84 Grain. | 1884-85 Grain. | 1885-86 Grain. |
|---|---|---|---|---|
| No. I selected ... | 1,171 | 1,527 | 922 | 1,710 |
| „ III „ ... | 1,258 | 1,282 | 947 | 2,308 |
| „ IV „ ... | 1,389 | 1,307 | 995 | 1,574 |
| Mixed „ ... | 863 | 1,765 | 1,085 | 2,144 |
| Bázár seed ... | ... | ... | 642 | 1,562 |
| Bearded bájri ... | ... | 1,510 | 815 | 1,615 |

The bearded bájri was separated in 1884-85 as an apparently different variety. With variations due to season, the improvement continues. The mixed-selected in 1882-83 was pilfered on the threshing floor, but on the whole it seems best. In the last two years the average of the selected plots showed a superiority of 300 lbs. grain per acre over the bázár seed. Selection of seed is very easy. In the case of cotton it only requires that the farmer should pick out in the field, at the best picking, good pods from the very best plants, and keep them for seed. In the case of bájri it is an easier matter even, for the farmer can on the threshing floor select the finest and best shaped spikes, and from these he can, after separating the grain, sift it till the largest grains only remain. I know that selection is not common among the natives, though there are exceptions. But even among well-to-do cultivators the tendency to trust to the Bunniah for seed is a great deal too common.

The Nadiád Farm Committee has recognized this deficiency in native cultivation, and has sought to induce a preference for selected seed, by purchasing

seed of various staples and then by retailing it at cost price, or even less. This laudable action will be noticed further on.

In Dhárwár, as noticed in para. 74 of last year's Report, an attempt was made to secure selection of seed by distributing seed taken from 5-celled pods. The results were not very satisfactory, both because there was no proof that the seed was sown as received, and because accurate figures were not available. I doubted this mode of selection. It has been tested at Haidarabad. Seed from 3, 4 and 5-celled pods was separately sown. The result was:—

| Kind of Seed. | Percentage of Pods in Outturn. | | |
|---|---|---|---|
| | 3-celled. | 4-celled. | 5-celled. |
| 3-celled pods ... ... | 24 | 71 | 5 |
| 4 " " ... ... | 9 | 77 | 14 |
| 5 " " ... ... | 4 | 69 | 27 |

Comment is reserved till further trial. The weight per acre of crop is an element not to be overlooked, and Mr. Strachan has been requested to add this detail in his next return. Some corroboration at any rate is afforded by the experiment to the mode of selection. There is no reason why it should not be observed in conjunction with the suggestions for selection above given.

### Miscellaneous Experiments.

*Linseed grown for flax (Haidarabad).*

52. American seed was sown. The best stems were only 2 feet long. The fibre was weak. Though the plant did not branch much, the experiment does not promise success.

*Introduction of shálu or hot-weather jowári (Bhadgaon).*

53. This variety of sorghum is much valued in the Deccan—giving green fodder in the hot season. It is little known in Khándesh. Hence the trial. The result was very favourable. A crop of 4⅓ tons per acre of green fodder was cut on the 8th March, worth Rs. 17 and costing only Rs. 7. "It is much to be desired," says Mr. Stormont, "in the interests of the working cattle, that the cultivation of this hardy sorghum for fodder should become more general." It requires irrigation of course.

*Trials with imported seeds.*

54. I received seeds from Messrs. Praschkauer & Co., of London, last year for trial. Mr. Praschkauer himself came to India. His main object was to learn by personal enquiry whether a profitable export cannot be created in minor products, for which the demand, though limited, is yet considerable.

He brought a few samples of green field peas, green, white and black beans, lentils, mustard and gram; and small millets. These have all been experimented with on the farms, and also on private land in various parts of the Presidency.

(1) *Field peas.*—At Bhadgaon the peas were sown on well-manured land. They germinated strongly, grew well, and flowered in two months. A check was caused by cold in January, and the crop thus weakened was damaged by caterpillars. The outturn was, however, good. At Haidarabad, frost caused injury, but the peas were judged to be good and suited to the locality. In plumpness the pea was the best of seven varieties tried. I caused some to be sown in the Mával—a moist tract above the gháts near Poona, where a poor variety of field pea, useless for export, is grown. In rice land the seeds did not germinate. In garden land they grew well, but were destroyed by caterpillars. The same fate befel sowings in garden land near Dhárwár. Further trials will be made, but the main object must be to improve the variety of pea grown as a late crop after rice.

(2) *Beans.*—The green and black varieties did well nowhere, but the white kind proved a great success. It is very similar to the large-fruited

dolichos—dolichos lablab—which goes under the names of *ghevda, vál, pávte* and *ávre* in the various parts of the Presidency. These are local names; and may be names of the same variety; but the seed received, is styled "*ghevda*" by the people. Ráo Bahádur Y. M. Kelkar says that the black variety is known, but not liked. He grew the white kind near Dhárwár. The crop was very good, but it was preferred as a green vegetable. The pods were larger than the common *ghevda*, and were much appreciated on account of superior taste and sweetness. Khán Bahádur Dorábji Padamji gave a very similar opinion from Poona. Full success was obtained at Bhadgaon and at Haidarabad. At the latter place the December sowings did best. The crop was unfortunately eaten by goats. In Junnar and Mával—moist parts of the Poona District—the crop is reported to have failed. Mr. Mudliar sowed all three kinds at Poona. He secured two pickings of both the green and the white kinds. I intend to apply for a considerable quantity of the white variety. It will grow where the *ghevda* succeeds, and is clearly proved superior. An improved vegetable is of no small value.

(3). *Lentils* did not do well. Our indigenous variety is good.

(4). *Gram.*—It turned out that the white kind of gram is identical with what is known as Kábuli gram, which is grown in the Nagar District.

(5). *Mustard.*—The crop was strong at Bhadgaon till destroyed by caterpillars. It grew excessively to leaf at Haidarabad and gave a poor crop. At the College of Science Farm, Poona, it did not yield seed. Mr. Kelkar near Dhárwár reports that the plants grew well for six weeks and then died off, which showed that the seed should either be sown earlier or in a moister soil than is usually chosen for indigenous varieties.

(6). *The small millets,* which are very similar to the indigenous *varai* and *sáwa*, Panicum miliaceum and Panicum miliare, though larger and more suited to an export demand, succeeded nowhere. They were tried in land usually sown with *varai* and *sáwa, i.e.,* uplands in very moist tracts in the Konkan, but either did not germinate or else came up very miserably. I tried *varai* or rather the seed resembling *varai*—called the long millet by Mr. Praschkauer—with *ráb, i.e.,* by sowing the seed on a seed-bed on which cowdung and grass had been burnt slowly, but it did not germinate. The want of success may be due to my having had to keep the seed nearly nine months, but it kept well apparently.

Messrs. Praschkauer & Co. have received detailed reports as to the results of the trials. I believe that seed was distributed in other Presidencies, but I have seen no reported results. A letter just received is added as an Appendix (B.)

55. *Australian oats* were again tried at Bhadgaon with irrigation, but though not harvested till the 7th May were not fully ripe. The climate appears too hot for them.

56. *Sorgho* (Bhadgaon) was grown in small plots to separate varieties for future growing. Mr. Stormont states that the Chinese sorghum or black jowári, and the ambercane, "a sport from the Chinese variety developed in America," are by far the best sugar-producers. Others are good fodder crops. The object is, however, to try to develop the sugar-producers. An evaporator was obtained from Cawnpur, made on an American muster, and others have been made up on the farm for trial this year. A trained apprentice has arrived from Cawnpur, and the sugar-producing qualities of the black jowári are now being tested. It is worth a good deal of expense and trouble to carry the experiment to successful issue. Sugarcane is a crop which holds the ground twelve months. Sorgho grows quickly and is far less expensive.

57. At Haidarabad, Mr. Strachan has continued his trials with carrots, mangolds, beet, peas and potatoes. The early Dutch Horn variety of carrots and the Telephon pea most commend themselves. Mangolds provide very suitable hot-weather food for cattle. The measure of success obtained justifies

further trial. The natives do not like beet-root. Success with potatoes appears as far off as ever. I supplied the best Poona tubers I could get, and some seed-potatoes were obtained from the Mulleer near Karáchi. Both did miserably.

There are still some important experimental results to be noticed under the head "Indigenous and Exotic Products" treated separately from the review of the working of the farms; but before I take them up I desire to place on record a short account of the Nadiád Farm.

### The Nadia'd Farm.

58. As noticed last year, this is a private institution, managed by a committee of practical agriculturists, who are desirous of furthering improvement in practice. They have spent a large sum in converting an uneven, low-lying, camping ground into a plot suitable for experiment. The Association has sent students for instruction to Saidápet—an example imitated by a considerable number of youths in Gujarát. It has instituted an agricultural show, which is held once in two years. The show of 1884-85 was a great success, and for that to be held next January over Rs. 6,000 are available without any subscription from Government.

It has established through the Educational Department an agricultural class at the High School, the students having the fullest opportunities of watching the operation of the farm. The leading spirit is the President, Mr. Behechardás Veháridás, who has done conspicuously important work in the improved cultivation of tobacco and in curing the leaf for the European market. Its income is derived chiefly from an agricultural pamphlet largely circulated throughout Gujarát.

An important change in the relations between the Association and Government has lately taken place. The land of the farm (12 acres) has been granted free of assessment, and water-rate, as long as it is used as an experimental farm for the furtherance of agricultural improvement. Another condition has been imposed, *viz.*, that the forms showing the cultivation of each plot and the results of the cropping, which are prescribed for Government farms, shall be kept up. This, without in the least encroaching on the independence of the Association, will provide such a record of experimental results as will be instructive to the general public, and will aid agricultural enquiry. The Association has readily entrusted the preparation of the "Cultivation Book" to the Teacher of the Agricultural Class of the High School. Till this book is kept up, I cannot review the record of the work of the farm.

The Association has established a shop for selling selected seed. It is unquestionable that agricultural seedsmen would, if established all over the country, confer immense benefit. The object of the Committee is to create an appreciation for good seed. It has purchased a considerable quantity of bájri, rice, wheat, and kodra—all staple crops—of the tract, obtaining its supply from even distant places noted for the excellence of one or other of the selected products, and has sold the seed at or below cost price. As yet experience is proving that much prejudice and ignorance have to be overcome; but the attempt is in the right direction, the success of which is probable when the management is in private hands, but not possible with Government agency.

## *B.—Experiments on various Indigenous and Exotic Products.*

### 1. Wheat.

59. The general distribution of hand-picked selected seed of selected varieties in chief demand in the export market has, as stated last year, been held in abeyance, because

(1). Hand-picking is very costly.

(2). Wheat is excessively liable to weevil.

(3). The colour and consistency of the grain are very variable.

(4). The seed does not do well in the first year of change.

Hand-picking must be left to the sowers. It does not repay its cost otherwise. The liability to weevil may be got over by care, provided the colour and consistency can be maintained, and provided the distribution improves outturn. I have instituted careful experiments on these points, but before giving the figures of the year I must notice a considerable distribution made, as stated last year, with the double object of giving the cultivators seed where the previous crop had nearly failed, and at the same time good selected seed.

Distribution of seed wheat in Bijápur and Belgaum.

60. In both these districts, the crop of 1884-85 had been very bad. The local wheat is a hard red grown as a dry crop, similar to that grown in Dhárwár, where the crop in places was good. I collected nearly 10 tons of the best Dhárwár wheat and caused it to be conveyed to the tálukás of Athni and Parasgad in Belgaum and of Bijápur and Hungund in Bijápur *before the rains* (one cause of previous failure arose from distribution *in* the rains), and there stored in the best known local method, to be kept till sowing time and then to be ready for distribution at a short distance from the fields where it would be sown. These precautions were to prevent damage from weevil. The precautions were not quite sufficient, for some damage by weevil is reported :—

| Táluka. | Villages. | Area sown. | Rate. | Cost of Distribution. | | | Receipts. |
|---|---|---|---|---|---|---|---|
| | | | | Seed. | Carriage and Storage. | Total. | |
| | | Acres. | Lbs. | Rs. a. p. | Rs. a. p. | Rs. a. p. | Rs. a. p |
| Parasgad ... ... ... ... | 15 | 242 | 25 | 151 3 2 | 28 12 10 | 180 0 0 | 141 11 5 |
| Athni ... ... ... ... | 6 | 209 | 27 | 151 3 3 | 62 9 9 | 213 13 0 | 155 0 0 |
| Bijápur ... ... .. ... | 7 | 156 | 28 | 114 0 6 | 40 14 0 | 154 14 6 | 114 11 7 |
| Hungund ... ... ... ... | 12 | 269 | 17 | 117 9 7 | 43 4 3 | 160 13 10 | 117 4 2 |
| Total ... | 40 | 876 | 24 | 534 0 6 | 175 8 10 | 709 9 4 | 528 11 2 |

In the Belgaum District the seed was all sold to selected cultivators at rates varying from 38 to 42 lbs. per rupee, on condition that the price should be paid on the harvest. In Bijápur it was also all sold at the current rate of 38 lbs. for cash. The only loss is the cost of carriage and storage, which was not large.

61. The results were not satisfactory. The yield was no better in Belgaum than that obtained with other seed, and the cultivators have only in a few instances shown even enough appreciation to induce them to keep seed for the next sowing. In Bijápur itself the crop was damaged by rust, and is reported to have done very badly. In Hungund it gave only an 8-anna crop, *i. e.*, a crop no better than that from ordinary seed. It is quite possible that the results were really better than they are reported to have been. The people are very loth to admit success, and perhaps expected too much. No accurate figures are of course available. Those reported are based on verbal statements, which are not sufficiently trustworthy for reproduction here. But the net result is still further discouraging to this mode of attempting improvement, though weevil was avoided nearly, and though the risk of failure from sowing seed of different colour and consistency from that indigenous to the tracts selected, was not run.

Distribution in the Rámdurg State.

62. In 1884-85 the distribution of seed wheat extended to several Native States. In Rámdurg of the Southern Marátha Country the result was poor, owing to weevils and rust and bad season. But seed was kept from the poor yields and sown in 1885-86. The report is favourable. The yield is better than of the local wheats, in one case being 8 fold. But the change of seed did not take with it any immunity from rust.

Distribution in Surat.

63. Last year some success was reported, for a spontaneous demand for the soft white from the Central Provinces arose from the results of previous distribution. The wheat of the tract (Olpád) is hard white. The success was not repeated, for reports affirm that the indigenous wheat was superior,

64. One-fourth of the sum allotted for improvement of wheat has been placed at the disposal of the Commissioner in Sind. In the first year (1884-85) all expenditure was confined to the distribution of varieties commanding the best price in the export market. Seed was obtained, through the Karáchi Chamber of Commerce, of soft wheat, white and red. Distribution was made in the three principal wheat districts:—

Distribution in Sind.

| District. | Amount distributed. | | Cost including carriage. | Area sown. | Rate on the average. |
|---|---|---|---|---|---|
| | Soft white. | Soft red. | | | |
| | Tons. | Tons. | Rs. | Acres. | Lbs. |
| Shikárpur ... ... ... | $5\frac{1}{3}$ | ... | 574 | 85 | 139 |
| Thar and Párkar ... ... | 4 | ... | 585 | 59 | 149 |
| Upper Sind Frontier ... ... | $1\frac{3}{4}$ | $1\frac{1}{10}$ | 427 | 71 | 91 |
| Total ... | $11\frac{1}{12}$ | $1\frac{1}{10}$ | 1,586 | 215 | 126 |

I have little trustworthy information on record regarding wheat cultivation in Sind, and the reports do not show what are the characteristics of the local varieties in the selected tracts. The imported seed in Shikárpur yielded only $2\frac{1}{2}$ fold, and was, therefore, practically a failure. Unsuitability of seed and rust and insufficiency of irrigation water in parts are reported as causes. With the sanction of Government the cost of the seed was not recovered. In Thar and Párkar, in spite of adverse circumstances (late sowing and failure, in part, of the water-supply), the results were sufficiently encouraging to induce a demand for a further supply for the next season. The outturn is reported to have been on the average 3 fold. But in places there was total loss by rats and in others damage by blight. Where these disturbing elements were absent, the yield was very good. The Chamber of Commerce considered that the samples of produce of the soft white were fully equal to the best Ekdáni of Bombay, *i. e.* the finest quality. In order to encourage the cultivation, the growers were permitted to keep the seed without charge for future sowing.

In Upper Sind Frontier, the yield was disappointing, though some samples were classed very high.

The Commissioner decided to allot no money in 1885-86 for the Upper Sind Frontier District. The available sanction (Rs. 1,200) was distributed as follows:—

| | Rs. |
|---|---|
| Thar and Párkar ... ... ... | 500 |
| Karáchi ... ... ... ... | 440 |
| Shikárpur ... ... ... ... | 260 |
| Total ... | 1,200 |

The results of the distribution of 1885-86 are not yet reported. It is believed that the advice of the Chamber of Commerce and myself, that care should be taken to purchase seed similar in colour and consistency to that of the selected tracts, has been followed. The best specimens of Sind wheat which I have seen are very excellent, and it is a question whether outside seed is at all wanted.

It was, however, decided to experiment with seed (soft white) from Muzaffarnagar chiefly on account of its alleged power of resisting attacks of rust, to which all the delta wheats of Sind are excessively liable. The indent for the Shikárpur District, at all events, has been countermanded, in order to make the money available for an experiment with the steam thresher (para. 69). Thus in Sind, as in Bombay, the tide of opinion is turning against the advisability of distribution of seed.

65. *Experimental Results at the Farms.*—As regards permanency of colour and consistency and benefit of change of seed.

*Bhadgaon.*—In 1884-85, hand-picked seed of hard red, hard white, soft red and soft white, selected by Messrs. Ralli Brothers on behalf of the Chamber of Commerce, were sown both dry and with irrigation. The soft white was obtained

from Jabalpur. The soft red from Akola, Ahmadabad and Jabalpur. The hard white came from the Hánsot Táluka of Broach. I do not know whence the hard red was procured. The local wheats are hard red in dry crop and hard white in irrigated land. The seed sown the second year was the produce of the previous crop. Hard white irrigated gave the best crop of all (797 lbs. grain and 2,465 lbs. straw), beating the local hard white by 142 lbs. grain and 1,270 lbs. straw. Hard red dry (513 lbs. grain and 1,700 lbs. straw) also beat the local hard red by 100 lbs. grain and 580 lbs. straw. In neither of these can the results of the first year be recorded, because the rate of seeding was not the same. Still the general result of the first year was considerable superiority in favour of the local kinds—a result now reversed.

Of the outside wheats, soft white and soft red, neither variety being similar in consistency to those indigenous, did remarkably well. The figures must be quoted in full:—

| Variety. | 1884-85. | | 1885-86. | |
|---|---|---|---|---|
| | Grain. Lbs. | Straw. Lbs. | Grain. Lbs. | Straw. Lbs. |
| Soft white (Irrigated) ... | 565 | 1,505 | 788 | 1,058 |
| Do. (Dry) ... | 458 | 2,835 | 730 | 2,120 |
| Soft red (Irrigated) ... | 572 | 2,585 | 772 | 3,516 |
| Do. (Dry) ... | 287 | 1,535 | 625 | 2,000 |

The improvement on last year is very marked, and the yields are very high for the season even compared with the best local kinds. The increase in the proportion between straw and grain is due solely to season—an accident. The increase in yield of the soft kinds shows an adaptability to change of locality. There are two circumstances, however, which make it yet doubtful whether general distribution of these kinds is advisable—a distribution which, if successful, would be a substitution of wheats *more* for those *less* suited for export, and these are :—

1. That the crop in the first year is poor decidedly below average of the local kinds. It will be immensely difficult to induce rayats to take the risk of immediate loss for prospective gain;

2. and that the tendency to hardening is clearly shown. Mr. Stormont declares that the soft white would now be classed as a medium hard. In the case of soft red this tendency, though observable, is neither so marked nor so rapid.

Mr. Stormont sums up as follows :—

> The teaching of the experiment, then, so far as it goes, seems to be that the substitution in any district of one distinct character of wheat for another (such as a soft for a hard) is not easy of accomplishment, if indeed possible; also that occasional changes of seed, if not too extreme, are particularly beneficial, especially in maintaining a high quality of grain.

The bushel weights of the crops grown from the produce of imported seed showed considerable increase—a satisfactory result, judged by Mr. Stormont to be an evidence of the benefit derived from change of soil. But the increase is not satisfactorily established. I tested the bushel weight of samples received by the chondrometer. In cases the test corroborated the entries made after measuring with a half-bushel measure. Mr. Stormont then remeasured the various kinds. A few instances are given :—

| Variety. | Result of Tests. | | |
|---|---|---|---|
| | Shortly after reaping. | Thoroughly dry. | By chondrometer. |
| | Lbs. | Lbs. | Lbs. |
| Soft white. ... ... ... | 64 | 60½ | 63½ |
| Soft red. ... ... ... | 66½ | 62 | 66 |
| Hard white... ... ... | 63 | 60 | 62½ |
| Hard red ... ... ... | 65 | 60 | 63 |

The Superintendent claims that correct results cannot be obtained by the use of the half-bushel measure. Differences also arise from the manner in which the measure is filled, and, as appears from the figures above, from the time at which the test is taken. Dryage reduces the bushel weight. Mr. Stormont has been authorised to procure a bushel measure direct from England, suitable for securing correct results.

At Haidarabad similar sowings were made in both years. The hard wheats were rusted to such an extent as to defy identification, while the soft kinds and the local wheats escaped almost entirely. These last are mostly soft. The outturn of the various kinds was not recorded, as Mr. Strachan supposed that the object of the experiment was to test permanency of colour and consistency only. On these points from samples received it was not possible to detect in the soft kinds any alteration in colour. None in consistency was likely, because the local kinds are soft. In the last season (1885-86) Mr. Strachan repeated the experiment. I may mention that I had added to the varieties obtained from Messrs. Ralli Brothers a hard white called Bakshi in Bombay grown as an irrigated crop, of excellent character, but little cultivated on account of liability to rust. New seed of the hard kinds was supplied, owing to the injury by rust in the former year. The results were much more satisfactory, though the Bombay kinds again suffered from rust. The Bakshi wheat was highly approved by the local traders. Mr. Strachan thinks that it will take a season or two more to acclimatize the new varieties.

*Trials with Foreign Wheats.*

66. The fresh trials of the year were with the fine soft white South Australian wheats, which came too late for sowing last year (Report, para. 64). The seed was kept well and sown sound.

At Bhadgaon only one variety, the "Tuscan," seeded, and that gave only a nominal yield—20 lbs. per acre. All the kinds were tried on the best wheat land, well manured, and both with and without irrigation.

At Haidarabad the "White Essex" gave a crop of 615 lbs. an acre. "Tuscan" and "Purple straw" 385 and 375 lbs. respectively; "Ashby's Prolific" only 65. All suffered from rust. The best yield was very light compared with the best local variety "Thori," also a soft white, which in one plot yielded 1,655 lbs. to the acre. "Ashby's Prolific" exhibited its characteristic, in that 93 shoots were counted all springing from one seed, which gave 4,650 grains. These wheats are likely to do well in Sind with earlier sowing. They are similar in colour and consistency to the local kinds, but must be acclimatized.

At Poona all were ruined by rust. Only the "White Essex" flowered. Mr. Woodrow considers this an illustration of heredity, for the local wheats resisted attacks of the parasite.

67. The failure with English pedigree seed, sent out by Messrs. Oakshott & Co., was reported last year. This firm was dissatisfied with the trials. The Secretary of State, passing over the abuse of the Indian wheat and the uncalled for allegation of opposition and insufficient supervision made by this particular firm, has nevertheless directed further trial and sent fresh seed. This has been distributed among the experimental farms. It remains to be seen whether better success will be secured. My conviction is that improvement in wheat is more likely to be effected by education of indigenous varieties than by importation of seed, pedigreed to suit different conditions from those with which we have to deal in India. I have not seen reason to depart from the conclusion drawn in last Report (para. 65).

*Wheat Hay.*

68. The importation, during the late Egyptian expedition, of wheat hay from Australia suggested an experiment as regards the value of growing the wheat and manufacturing the hay locally. The success attained on the cultivation was fully reported last year. It only remains to describe the trials made with the pressed hay made over to the Commissariat Department. Eight tons were fed to battery horses and 17 tons to pack mules of the transport service. The

animals were kept on the hay, without any other food, for a month, with the result that there was a general falling off in condition. It was considered conclusively proved that the hay cannot be substituted for the ordinary rations.

The cost of the stuff came to Rs. 689, or Rs. 12 per 1,000 lbs. The savings in ordinary grain and forage rations amounted to Rs. 571. The loss was, therefore, Rs. 118. About 6 tons, however, appear to have been used as bedding. I concur with the opinion on the general merit of the trial expressed by Mr. Stormont, who grew the wheat and made the hay. "Wheat straw is the most innutritious of all field fodders. Besides, in this country, the finer kinds require artificial irrigation to secure a bulky crop, and under these drawbacks as a fodder have to compete with the ample list of sorghums, all of which are easily cultivated, and are more or less saccharine. Some of the cold-weather sorghums with strawy stems would probably make an excellent quality of hay prepared in the manner of the Australian wheat hay."

As indicated last year (Report, para. 64) a portion of the Australian beardless wheat was left to seed. The seed was sown in 2 acres of irrigated land, but the yield was indifferent, though the quality of the grain was much improved. It is noticeable that the beardless wheat showed a tendency to develop awns, which all local varieties possess.

*Steam Wheat Thresher.*

69. Seeing that improvement in wheat appears improbable by means of distribution of selected seed, and that the charges against the rayat of sowing hard and soft kinds and wheats of different colours together and charges as to the admixture of foreign seeds have been practically disproved, I have turned attention to improved methods of preparing the crop for market. Defective dressing resulting in admixture of dirt is clearly substantiated. The circumstances under which I am now attempting to introduce steam machinery to thresh and clean the crop have been detailed in former reports.

During the past season the progress made is decidedly encouraging. Messrs. Marshall, Sons & Co., of Gainsborough, have brought out an improved machine altered in the light of experience gained in the previous trials. The new thresher is a success. The straw is thoroughly bruised. Government has permitted me to purchase a thresher and an engine costing, landed at the Bhadgaon Farm, Rs. 5,507 from the annual allotment of Rs. 10,000 for wheat improvement. Experiments made show that the machine works well with gram and linseed as with wheat. A representative of the manufacturing firm has come to India to stay, at any rate one year, to foster the project. Local agents have been appointed—Mr. L. K. B. Macbeth for Bombay and Messrs. Mackenzie & Co. for Karáchi. The representative of Messrs. Marshall, Sons & Co., Mr. Harper, has arranged for further and more extensive trials next season. One of the most interesting will be made at Shikárpur, in Sind, at the annual show to be held in January. Here the Punjab authorities will have an opportunity of seeing the machine. An invitation has also been received from Nágpur, which will, no doubt, be responded to. Meanwhile Mr. Stormont will work his machine in the rich wheat tracts of Khándesh.

I believe that it is highly probable that a company will be soon formed to import machines and work them for hire. This is, to my mind, the best possible system, though when it has become more general, zamíndárs in Sind and Native States in Káthiáwár and elsewhere may be able to purchase and work machines on their own account.

There is abundant evidence that though the dirtiness of Indian wheat is admittedly the principal reason why it does not secure a market suitable to its merits, it will be no easy matter to secure a fairly enhanced price for clean wheat, owing to the difficulty of securing the co-operation of the traders in wheat, who are wedded to the long-established custom of allowing a refraction varying from 2½ to 5 per cent. on account of dirt. In a special report published by the Agricultural Department, Bengal, some strong facts bearing on this subject have been recorded, which fully bear out the fact that the trade is not yet ready to make any sacrifice or to take any special steps to eliminate or

diminish the refraction, which rude methods and the once small importance of the wheat trade established.

There are, however, hopes of better things. One large wheat firm has undertaken to ship all the clean wheat that Mr. Stormont can send them with the object of securing a special quotation for steam-threshed wheat, and the largest miller in Bombay is ready to take all the soft wheat that we can prepare at a proper price. Unfortunately Bombay wheats are hard. The trial in Nágpur may supply the demand, which in the interests of the project it is very desirable to meet.

*Wheat Trade.*

70. A statement showing the course of trade during the last six years and for the eight months of the present year is appended (C.) from which the growing expansion of the wheat trade of the Bombay Presidency will be apparent. The lower rate of exchange, the fall in the freight charges (Appendix D.), and a better harvest of the last season have led to a brisker trade in wheat during the first six months of 1886 compared with the same period of 1885. Till lately, Russia was second to the United States as a wheat-supplier to Great Britain. This position she has lost. The returns of the Customs Department of Great Britain for the first seven months of 1885 and 1886 show a falling off of more than 50 per cent in the imports of Russian wheat. The imports of Indian wheat, on the other hand, show an increase of 6 per cent; in fact, during the first seven months of 1886, India supplied Great Britain with more than twice as much wheat as Russia. There has also been a considerable falling off in the imports from the United States, which tends to show that India has been able to increase her sales of wheat in the English market. This will be apparent from the following statement :—

*Imports of Wheat into Great Britain.*

| Source of Supply. | 1885. (First 7 months.) | 1886. (First 7 months.) |
|---|---|---|
| | Cwts. | Cwts. |
| Russia ... ... | 5,113,600 | 2,151,296 |
| India ... ... | 4,317,158 | 4,579,080 |
| Atlantic ports ... | 6,369,086 | 5,211,826 |
| Pacific ports ... | 9,671,305 | 6,654,436 |

There is prospect of a wheat trade with Australia also. I give extracts from an article which appeared on 14th August in the *Queenslander* :—

The importation of wheat from India to these colonies is one of the consequences—one of the necessary consequences, it might almost be said—of the establishment of regular steam communication between India and Australia. By advices that have been received we learn that two of the vessels now expected are bringing 500 tons each, half for Hobart, and the balance for Adelaide, Sydney and Brisbane, while freight-room for 1,000 tons more had been secured in boats to follow shortly. The opening of this trade is a matter of the highest meaning to these colonies, but it does not affect all of them in the same way. New South Wales and Queensland are poor wheat-producers, not because that cereal will not grow readily in these two provinces, but from a variety of causes which lead to the investment of capital in other and presumably more generally profitable pursuits. They, therefore, are largely dependent upon their neighbours for the flour they consume; and even Tasmania, in spite of the productiveness of her rich agricultural lands, is in a similar position, for in that colony the business of agriculture has largely given place to that of stock-raising. In South Australia and Victoria, on the other hand, the production of wheat is much larger than the local consumption, and from these the short-producing colonies have hitherto derived their supplies; nay, more, they have even aspired to meet the wants of the people of England, and during the last few years have shipped many thousand bushels to the home

market. So far as they are concerned, therefore, India, whose trade has been so eagerly looked for, has suddenly appeared in the character of a powerful and dangerous competitor. * * * * * * *

The success of the Indian venture seems to mean the destruction of the wheat industry in South Australia; for, although by a repressive tariff Indian grain may be excluded from her own territories, the two will have to meet as competitors in an open market elsewhere. Everything depends upon the price at which Indian wheat may be landed in the colonies and its suitableness as a flour-producing grain. As to price, it is said that the Indian wheat can be put upon the market at 3*s.* per bushel, while Adelaide quotations just now are 4*s.* 8*d.f.o.b.*at Port Augusta; so far as price is concerned, if these quotations are correct, the farmers' price will have to be cut down to an extremely low rate to enable the Adelaide miller to compete with the Indian trader. It is urged, however, that the Indian grain is of a peculiar character and requires an admixture of other kinds to produce a marketable flour such as is required here; but, even if this be so, all that it means is that the competition will not be absolutely but only partially disastrous—a poor consolation surely. So far as India's capacity for supplying Australian demands is concerned, it is quite unnecessary to go into detail. She has an immense wheat territory, and as railways are pushed into the interior, thousands of acres of new wheat lands are brought within reach of the coast; the soil is productive, and labour is extremely cheap, and, in short, India is the great competitor whose operations checked the increase of wheat culture in the United States and marked the limits beyond which it ceased to be profitable. It is no novice that is offering us this trade, but one of the giants amongst wheat-growing countries.

It is interesting to watch the progress of wheat export from the hitherto untapped districts of Dhárwár, Bijápur and Belgaum. In the first eight months of the year, 12,246 tons were conveyed by the Southern Marátha Railway to Bombay. During the same period, imports by sea were only 780 tons. Wheat suffers more from keeping than cotton. The coast ports are closed in the mónsoon, and though the wheat crop is ready for the market sometimes before the closure of the ports, the traffic by rail was very brisk throughout June, July and August. The wheat of this tract is all hard red—not preferred for export, but of fine characteristics, which will give it a ready market where hard wheat is in demand.

## 2. Cotton.

71. I have very little to place on record respecting this important staple. No further movement has taken place in the direction of check against admixture, and I have no district agency to record the damage done by carting seed cotton from districts, where the staple is bad, but the colour good and the cotton cheap, to be ginned with superior cotton. That this admixture goes on I have no doubt, and it is certain that the mixed seed is sown in the localities where the ginning is done to the great detriment of the crop. One circumstance, however, is worthy of note. The Liverpool Chamber of Commerce has established a new standard which will be known as *Bilati*. It will include the short-stapled *Umras*, and will apparently be a direct check against the export of the short-stapled *Varadi* as it is called in Khándesh, or *Khandeshi* as the Berár people chose to denote it, under the standard of *Umras*. It remains to be seen from the quotations and trade returns the price which the new standard will command and the proportion it holds to the whole crop.

72. *The sawgin.*—I am glad to report that the Haliyál saw-gins are now worked by steam instead of by bullock power (last Report, para. 79). This is, however, the only place in the whole Presidency, except the two Government farms, where the steam saw-gin is used to clean cotton. No change has taken place regarding the manufacture, repair and distribution of hand saw-gins in Dhárwár, described in para. 77 of last Report.

At Bhadgaon, now that Mr. Stormont has a steam engine, he will work saw-gins to clean the farm cotton and the small amount of the Dhárwár-American still grown in the neighbourhood from farm seed. At Haidarabad an experiment with the saw-gin for cleaning the indigenous cotton has been most successful. The whole of the farm crop was ginned with the improved saw-gin sent from the Bhadgaon Farm driven by a 6-horse-power engine. Mr. Strachan reports that the cost was Rs. 1-3-1 per maund of 84 lbs. as compared with Rs. 2½ to Rs. 2¾ for the native hand *charka* The clean cotton sold for Rs. 15

per maund, while the ordinary native was selling for Rs. 13-8 The seed could have been sold for Rs. 1-10 per maund, but the price of the clean cotton alone was more than would have been got for both cotton and seed had it been sold unginned. The outturn of the gin was 18 maunds per day of 9 hours. The Karáchi Chamber reported : saw-ginned Sind native cotton from selected seed appears to be a great success. The staple does not show any signs of having suffered from the process of ginning, and is valued at about Rs. 1½ to Rs. 2 more than the average native Tánda.' The hand-ginned samples of selected Sind cotton, *i. e.* grown from the selected seed, were valued at Re. 1 to 1¼ above the then existing average selection of Sind. It is noticed further by Mr. Strachan that the saw-gin does not crush the seed, and that the percentage of clean cotton is greater than that obtained by hand-cleaning.

Dhárwár-American seed in Bijápur.

73. Seed from Dhárwár was sent in 1883 and distributed in Bijápur. The results were unsatisfactory: one reason was that there were no saw-gins. Government ordered further experiment (Government Resolution No. 9274, dated 22nd November 1884). The conduct of the new trial was entrusted by the Collector to the District Inspector. He found much prejudice in the way. Some rayats declared that the seed of the new variety would cause temporary blindness to their cattle. This prejudice is of course perfectly gratuitous, and only an instance of the readiness with which the cultivators conjure up objections to any modification of their practice. One rayat allowed a small area of 4⅛ *gunthás* to be sown. The yield was 18 lbs. or about 175 lbs. seed cotton to the acre,—a yield which compared very favourably with that of the indigenous cotton in the same season. The kulkarni of the village, who bought the small yield of the plot, has asked for seed, and a spontaneous demand has come from other rayats. The importation of fresh seed from America may, however, enable me to meet the demand more profitably than by distributing the degenerate seed, the produce of old importation.

74. *Fresh Seed from America.*—I have carried out the plan sketched in para. 81 of last Report in all its details. The Chamber of Commerce readily gave me the assistance needed. The indent from Kolhápur and the States under the Agency was very large. Miraj Senior and Junior asked for 24 tons alone. In face of the large cost of new seed, I advised that a small amount should be distributed the first year, the whole of the seed secured, and then distributed largely. I only imported ½ ton of Boyd's Prolific Louisiana and ⅛ ton of Memphis 'Upland' and 'Allen' seed and ⅛ ton of 'Bruder' seed from Helena in Arkansas. Messrs. Ralli Brothers, who imported the seed, have given details which for future guidance are valuable. I take this opportunity of expressing my obligations to the firm for the care and interest which have been displayed :—

(1). It was decided more advisable to send the seed in bags than in hogsheads, to avoid injury from heating and to save cost.

(2). The seed was selected from October pickings rather than from the earlier crop of August or September. Seed from the middle crop was judged likely to give the best results.

(3). It was considered better to select New Orleans than Texas seed, and still better to try seed in Dhárwár from a more northern latitude than either New Orleans or Texas. Acting on this consideration, the seed, as noticed above, comes partly from Tennessee and Arkansas, and it is expected that this seed from higher latitude will mature earlier.

(4). White seed was preferred to green—a preference which the Dhárwár rayats were unanimous in insisting upon. Nevertheless the Louisiana seed appears to have a decided tinge of green.

(5). The selected seed is of an ordinary stapled rather than of a really long-stapled cotton. The length of staple made by each in its own locality is stated to be as follows :—'Upland' 1-1½ inch, 'Allen' 1½ inch, 'Bruder' 1⅛ inch. The length of Louisiana is described as good.

(6). The cost price of the Louisiana (1 dollar per bushel of 30 lbs.) was high. The others cost about half, but all the seed was seed specially selected for planting.

I have recorded these facts in detail, because the absence of a similar record of previous importations was much felt by me.

The cost of seed landed in Bombay was,—Louisiana Rs. 416, Memphis and Helena Rs. 289 per ton.

The distribution was made approximately as follows :—

| Districts. | Louisiana. | Memphis. | | Helena Bruder | Total. |
|---|---|---|---|---|---|
| | | Upland. | Allen. | | |
| | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. |
| KolhápurAgency. | 682 | 95 | 50 | 163 | 990 |
| Dhárwár... ... | 358 | 68 | 34 | 100 | 560 |
| Bhadgaon Farm . | 40 | 10 | 10 | 10 | 70 |
| Bijápur ... ... | 20 | ... | .. | ... | 20 |
| Panch Maháls ... | 20 | 7 | 6 | 7 | 40 |
| Total ... | 1,120 | 180 | 100 | 280 | 1,680 |

In the Kolhápur Agency most of the seed has been sown at about 8 to 10 lbs. per acre in Kolhápur, Sángli, Miraj Senior and Junior. It has germinated well, and early sowings are reported to be healthy and strong.

In Dhárwár very especial care was taken by Mr. Price. Villages were selected by me two years ago as having land especially suitable for the American cotton, and as having kept up its cultivation most successfully. The seed was sown partly in Mr. Price's presence and partly under the supervision of the Assistant District Inspector, and so the most careful record of the rate of seeding, kind of land, and the like will be available for deductions.

In Bhadgaon the cultivation is purely experimental. The sowings are early there, and I have already seen the produce. The seed germinated well, but the crop is very poor. The pods are large and the cotton of a good colour, length and silkiness. I did not expect the crop to be large the first year (last Report, para. 81).

In Bijápur, seed was sown by the District Inspector. That sent to the Panch Maháls was sown on Mr. Bomanji A. Dalál's farm, where its success or otherwise will be carefully recorded.

75. *Nankin Cotton.*—(Last Report, para. 105). This variety is still cultivated on the Haidarabad Farm to test the permanency of colour. The Superintendent has put forward a theory that uniformity can be secured by selection of seed from pods of any desired colour. He selected seed from 6 plants, the colour of which showed variation from a light tawny to the deepest brown. The produce was kept separate. Before it was ginned, the lighter shades appeared to have greatly changed colour, but the change disappeared in ginning, and the net result was a decided irregularity, which points to a state of transition. Desultory trials were continued at Bhadgaon and in Sholápur regarding which there is nothing to record.

### Forecasts of Wheat and Cotton.

76. Forecasts were sent monthly from October to March in the case of cotton and from December to May in that of wheat. The method of obtaining the reports direct from the Mámlatdárs has answered well. Uniformity and punctuality were secured. The Native States used the forms prescribed for British districts, with slight modifications. The Baroda State submitted returns, and the forecasts were complete for the Presidency. I cannot say how far they are valuable to the trade.

77. The results may be summarized as follows :—

*A.—Cotton.*

The area under cotton was:—

| Province. | Average Area of previous 6 years. | 1884-85. Area. | 1885-86. | |
|---|---|---|---|---|
| | | | Area. | Outturn. |
| *Gujarát.* | Acres. | Acres. | Acres. | Bales. |
| British Districts ... | 5,33,968 | 5,65,368 | 6,39,074 | 1,14,645 |
| Native States ... | ... | 23,16,818 | 25,24,656 | 4,52,904 |
| *Deccan.* | | | | |
| British Districts ... | 9,12,956 | 9,47,132 | 7,33,315 | 1,10,465 |
| Native States ... | ... | 2,625 | 5,539 | 834 |
| *Karnátak.* | | | | |
| British Districts ... | 7,79,025 | 7,83,444 | 7,59,727 | 1,09,000 |
| Native States ... | ... | 1,56,912 | 1,78,322 | 25,584 |
| *Sind.* | | | | |
| British Districts ... | 57,995 | 72,767 | 71,518 | ... |
| Native States ... | ... | 2,858 | 2,757 | ... |
| *Total.* | | | | |
| British Districts ... | 22,83,944 | 23,68,711 | 22,03,634 | 3,34,110 |
| Native States ... | ... | 24,79,213 | 27,11,274 | 4,79,322 |
| Grand Total ... | ... | 48,47,924 | 49,14,908 | ... |

**Gujara't.**—Varieties, *Dholera* in north Gujarát, Káthiáwár and Cutch, and *Broach* in the central and southern parts of the province. Area almost everywhere above the last year, and in the chief cotton districts above the last six years' average, the early rainfall being generally favourable and seasonable. The deficiency of late rain was much felt throughout the province, except in Broach, where there was excellent rain in October. In parts there was some damage from frost.

**Deccan.**—Varieties, *Khandeshi* in Khándesh and Násik; *Nagar* in Ahmadnagar, and *Barsi* in Sholápur. Except in Sátára, area much below average, and except in Sholápur and Ahmednagar much below last year. Early rains were very late and unfavourable. In Khándesh the crop in many places suffered from long breaks, and though in places it was good, more so than usual, it was on the whole short. Average yield about ¾ crop in Khándesh; in other districts it was very poor.

**Karna'tak.**—Varieties, *Kumta* (indigenous) and *Dharwar* (acclimatized American). Area everywhere above last year, and above average, except in Bijápur. In these districts cotton is sown late in and after August. The season this year was late, particularly in Bijápur. In parts the crop was blighted by cloudy weather in January.

**Sind.**—In Haidarabad, the important cotton district, the area was slightly above last year, but considerably above average. There was slight damage from boll-worm.

*B.—Wheat.*

The area under wheat was:—

| Province. | Average Area of previous 6 years. | 1884-85. Area. | 1885-86. | |
|---|---|---|---|---|
| | | | Area. | Outturn. |
| *Gujarát.* | Acres. | Acres. | Acres. | Tons. |
| British Districts ... | 3,57,155 | 5,17,684 | 3,64,592 | 1,30,200 |
| Native States ... | ... | 5,56,516 | 4,43,498 | 1,58,400 |
| *Deccan.* | | | | |
| British Districts ... | 8,23,598 | 9,79,131 | 12,32,473 | 3,13,000 |
| Native States ... | ... | 20,517 | 27,208 | 7,000 |
| *Karnátak.* | | | | |
| British Districts ... | 3,41,808 | 5,96,660 | 4,79,562 | 98,000 |
| Native States ... | ... | 1,09,879 | 1,01,641 | 20,800 |

| Province. | Average Area of previous 6 years. | 1884-85. Area. | 1885-86. | |
|---|---|---|---|---|
| | | | Area. | Outturn. |
| *Sind.* | Acres. | Acres. | Acres. | Tons. |
| British Districts ... | 2,72,858 | 3,05,645 | 2,84,658 | ... |
| Native States ... | ... | 35,694 | 35,907 | ... |
| *Total.* | | | | |
| British Districts ... | 17,95,419 | 23,99,120 | 23,61,285 | 5,41,200 |
| Native States ... | ... | 7,22,606 | 6,08,254 | 1,86,200 |
| Grand Total ... | ... | 31,21,726 | 29,69,539 | ... |

**Gujara't.**—Except in the Panch Maháls, area slightly above average, though short in comparison with the abnormally large area of 1884-85. In the Panch Maháls the rain at sowing time was poor. Season on the whole favourable, though in parts there was slight damage from frost and cloudy weather. Chief varieties of wheat are: Dry-crop hard white (Hánsia and Dáudkháni) locally much esteemed, but too dear for export; and hard red (Kátha). The irrigated soft red (Vájia) is largely grown in north Gujarát, Káthiáwár and Cutch, and is in demand for export, though of low estimation locally.

**Deccan.**—Area everywhere above last year and above average. The early rains were not favourable nor seasonable for kharíf crops: hence a larger area was put under wheat. The showers in November and December were beneficial. But rust appeared in irrigated lands. In spite of rust, crop was nearly up to average. The chief varieties are: Bakshi (excellent hard yellow), Dáudkháni (medium hard white), Kátha (hard red), and Khapli, which is really spelt not wheat.

**Karna'tak.**—Area below last year, but above average, owing chiefly to unsuitability of early rains for kharíf crops. December rain very beneficial, though it induced rust, which was everywhere prevalent, but was not severe, except in Kolhápur. Crop a little below average. The chief variety is dry crop hard red, which in places is of excellent characteristics for export.

**Sind.**—Chief wheat district is Shikárpur, where the area was up to average, but below last year, owing to insufficient water-supply from some of the canals. Most of the Sind wheats are irrigated. The dry-crop area is confined to the flooded land. Crop everywhere good.

78. The figures for the area are fairly complete, though as regards Native States perhaps less accurate than elsewhere. An attempt was made to compute the outturn for all British districts, except Sind, by the use of the formulæ prepared under the orders of Government in 1883 for estimating outturn. For Native States the outturn was estimated according to the proportion found in the British districts. The formulæ, which were drawn up by a Committee of experts, are, no doubt, the best evidence yet available for calculating the outturn. But the way in which they are now used by village and táluka officers so far frustrates the object intended to be secured by them, that I was constrained to represent to Government the advisability of their withdrawal from the táluka offices. In the revised Manual (Táluka Form No. 36) provision has been made for the insertion, by the Mámlatdár, of the anna valuation of crops based on his observation and on the information furnished by village officers and cultivators. From the estimates of the crops in annas furnished by the Mámlatdárs, some approximation in weight may be possible. The whole question, including that as regards the standard to be adopted in estimating the outturn of crops in the preparation of forecasts, has been referred by Government to a Committee consisting of the three Divisional Commissioners. (Government Resolution No. 6685, dated 21st September 1886, Revenue Department.)

79. As regards trade in these two articles in the several districts of the Presidency, the information in the forecast reports is still imperfect. So far as the returns show, about 7½ lákhs of bales of cotton were received into Bombay from all parts of the Presidency during the six months ending 30th June 1886, or nearly half of the total imports into Bombay from all parts of India. Of the 7½ lákhs about 5 lákhs were from Gujarát, including all Native States, about 140,000 from the Deccan (from Khándesh and Násik), about ½ lákh from the Karnátak Districts, and about 20,000 from Sind. The total exports from Bombay to all external ports amounted to 9,34,000 bales.

It is interesting to note that of the total 48,000 bales received into Bombay from the Kánarese Districts, half were received by sea and half by rail. This seems to show that the sea route can still compete with the railway. Yet large export by the latter route, impossible by the former, goes on in the monsoon months. The monthly trade returns given in the margin show that the total exports of cotton by sea from these districts to Bombay rose from about 2,000 bales in April (when the new crop begins to be ready for the market) to 12,000 in May. After May the exports fell to 4,000 in June, 360 in July and 250 in August. The returns of trade by rail, on the other hand, show that the exports rose from 1,734 bales in April to 8,714 in May and to 13,253 in June. In July and August they were 7,500 and 6,943 bales respectively. These figures show the great benefit the Southern Marátha Railway has conferred on the cotton trade of this part of the country. Had the railway been not constructed, the 27,000 bales of cotton of the new crop, which is nearly half of the total exports, would have been stored in local godowns, to be there partially damaged, and would have been brought to Bombay after the rains.

| Months. | By Rail. | By Sea. |
|---|---|---|
| 1886. | Bales. | Bales. |
| January ... ... | 36 | 2,592 |
| February ... ... | 34 | 1,456 |
| March ... ... ... | 234 | 1,191 |
| April ... ... ... | 1,734 | 2,311 |
| May ... ... ... | 8,714 | 12,317 |
| June ... ... ... | 13,253 | 4,207 |
| July ... .. ... | 7,503 | 360 |
| August ... ... | 6,943 | 249 |
| Total ... | 38,451 | 24,683 |

As regards wheat, the total quantity received in Bombay from all parts of the Presidency during the six months ending 30th June 1886 amounted, roughly speaking, to 72,000 tons, of which about 50,000 tons were from the Deccan (this includes the wheat from the Nizám's territory booked from the railway stations in the British districts), 13,000 were from Gujarát and about 8,000 from the Kánarese Districts. The Deccan wheats are evidently the hard white variety in demand in South Europe, the Gujarát wheats are the irrigated soft red wheats (Vájia), and the Karnátak wheats are the hard red wheats which are pronounced by the Chamber of Commerce as suitable for export. The Sind wheats (red and white soft) are not received in Bombay, but are sent to Europe direct from Karáchi. The fact that the 72,000 tons represent about a fifth of the total imports received in Bombay during the same period from all parts of India shows the extent to which this Presidency is contributing to the expansion of the Indian wheat trade.

80. Some alterations have been made regarding the submission of the forecasts for the next season. In March last, the Government of India decided* that for the coming season, in stead of six monthly forecasts, two should be submitted for cotton—one in the latter half of July containing a statement of the character of the crop, and the other in the latter half of October containing the fullest details available as to both the area and prospects. The wheat forecasts were similarly reduced from six to three,—the first on the 20th December containing a rough account of the state of the crop and the area figures wherever available; the second on the 1st of March containing accurate information regarding both the estimated area and the state of the crop; and the third on the 15th of May containing revised and fuller information on the points mentioned in the second report, with a general statement regarding the character and prospects of the other food crops. These orders are in accordance with the principles proposed by me in 1884†, when the question of the preparation of forecasts was first raised. The dates fixed for the submission of the cotton forecasts were evidently unsuited to the requirements of this Presidency, as in some of the most important cotton tracts cotton is sown as late as August and sometimes as the end of September. They were accordingly changed. The dates now fixed for the first report are 10th September for the early districts of the Deccan, and 10th October for the rest of the Presidency; and for the second report the 10th December and 10th February respectively. No modifications of the orders were required in the case of wheat.

*Bombay Government Resolution No. 2324, dated 25th March 1886, Revenue Department.

†Letter No. 376, dated 30th April 1884 (*vide* Government Resolution No. 7298 dated 12th September 1884.)

81. The subject of the preparation of forecasts for oil-seeds was again pressed by the Government of India, and reports similar to wheat were asked for winter oil-seeds. The subject is beset with many difficulties. There are no less than six different kinds of oil-seeds produced in this Presidency. Most of these are grown in some parts as *kharif* and in others as *rabi* crops, and again in the same tract varieties of the same crop are grown in both seasons. If the forecast of oil-seeds is attempted, separate details must be given for each variety. But this, again, is not possible, as in the returns of this Presidency some are erroneously confounded (*e.g.*, niger with sesamum), and cannot yet be separated. These facts and the inadvisability of extending, for the present, the scope of the forecasts to crops other than cotton and wheat induced the Government of India to decide that, pending further communication on the subject, no forecasts need be submitted from this Presidency for oil-seeds.

### 3. Tobacco.

82. The opinions received from experts on the samples of Nadiád cured tobacco are not more favourable than the former opinions recorded, nor has the plan of selling samples in bulk through brokers secured as favourable a result as was anticipated.

The Italian Consul reports the opinion of the Commission appointed to have been that the tobacco is not suitable for the monopoly, the leaves being dry and insufficiently developed, and the material wanting in burning properties as well as in aroma. A Liverpool firm thought that the tobacco would fetch 5*d.* per lb., but commented on the lack of burning power. The Gibraltar opinion was somewhat similar; but it is stated that the demand there is for a dark strong tobacco.

Other opinions are more or less favourable; but, on the whole, the experiment of last year cannot be said to have been successful. All the opinions are sent to Mr. Behechardás Veháridás, and further experiment rests with him. I have twice visited his curing sheds, and need only say that he is doing with his colleagues all he can to fit the tobacco for its most suitable market. He has sown seed of various foreign tobaccos, and has still kept Mr. Jöns in his employ. The Junágadh Darbár is also co-operating. Samples of Nadiád tobacco were sent to the Indian and Colonial Exhibition, but, as far as I know, have not attracted notice.

### 4. Arrowroot.

83. Both Mr. Woodrow on the College of Science Farm and Mr. Gogte in Ratnágiri have improved their area under arrowroot and the preparation of the starch, as well as the cost. Last year the latter offered arrowroot at 12 annas per lb. The Commissariat Department procures its supplies at 4½ annas on the average, and could not afford to encourage a more costly article. Later on, an offer for Commissariat supplies at 6 annas per lb. was made, which I considered worthy of support. The Commissary General submitted samples of arrowroot supplied by contractors at Bombay, Poona, Mhow and Karáchi to the Chemical Analyser, who found the Mhow sample to be Maranta (as Mr. Gogte's is), and the others Manihot arrowroot, which is not inferior. It was shown that the loss which would be incurred by accepting Mr. Gogte's offer would amount to Rs. 868. Government declined to encourage the local industry at this cost. Mr. Gogte, undaunted, has gone on, and in August offered to supply the amount required by the Commissariat at 4½ annas per lb. delivered at each station, *i. e.*, at a rate as cheap as that ruling in the Commissariat contracts, where though some samples are clearly as good as that offered, it is not by any means shown that all are as good as the samples analysed. Mr. Gogte makes the condition that he should be guaranteed the supply for five years. This last offer is under the consideration of Government.

### 5. Indigo.

84. The resuscitation of indigo as a field crop in Gujarát appears likely. It seems therefore advisable to notice here shortly the history as far as it is on record. In the 16th and 17th centuries, indigo, partly of local growth and partly brought from Upper India, was one of the chief exports of

Gujarát. Towards the close of the 18th century (1777) the cultivation, chiefly for local use, would seem to have been on a very considerable scale in Gujarát. But in the early part of the present century it again fell off, and in 1827 had almost altogether ceased. At that time, prices were high and the demand was strong, and Captain Cruickshank, then engaged in surveying northern Gujarát, was of opinion that by the help of a little special encouragement the people of Kaira might, especially in Petlád, be induced to grow indigo. The attempt failed, and indigo has never again become a product of any importance. When grown in rotation with other crops, indigo has the merit of leaving the land richer than it found it. Indigo refuse is a valuable manure. The labour and capital required for its production and the comparatively small profit it yields (net profit of Rs. 18 per acre) are perhaps the chief reasons why indigo is now grown only to a limited extent. In 1884-85 the area under indigo in Gujarát was 1,468 acres, of which 557 were in Ahmadabad, 302 in Kaira and 609 in Broach. There were also 3,717 acres in Khándesh. In other districts of the Presidency, it is not grown. Another reason why it is not popular in Gujarát is that the preparation of the dye is accompanied by loss of insect life —a result most distasteful to the Kunbi and Koli cultivators of Kaira.

A small plantation for experiment has recently been made in Junágadh at the instance of Mr. Haridás Viháridás, the Diván. A factory for the manufacture of the dye has been opened. The opinion (10th April 1886) of the Calcutta firm of Messrs. J. Thomas & Co. on a sample of the product of the first year's trial was: 'In colour and paste it resembles some of the indigo made in the Aligarh Districts. We should describe the indigo as broken and small broken, close dark and dark-reddish, and is worth at the highest point of last indigo season about Rs. 150 to Rs. 160 per maund. No attempt apparently has been made to make the indigo into square or, say, oblong cakes, in which shape its value would be improved. The indigo would also be more appreciated if it were redder in colour and softer pasted. Its dark appearance is quite likely, we think, to be caused by oversteeping, and this would also tend to make the paste close and hard. There is one good point about the indigo, and that is it is clean and fairly free from sand.' These suggestions will receive the careful consideration they deserve at the hands of the Junágadh authorities, who promise in future to turn out the stuff of the purest quality in oblong or square cakes and of the paste and colour required. The area under indigo this year (1886) in Junágadh is about 600 acres, and, if no injury happens to the crop by the excessive rainfall of the season, the estimated outturn will come to 300 Indian maunds, which quantity will be available for the market.

### 6. Manilla Hemp.

85. The experiments referred to in para. 39 of my Report of 1883-84 have been in part prosecuted. Mr. Strachan at the Haidarabad Farm has given attention to the subject, and is not encouraged. The fruit is small, and it shows a tendency to fall or rot before it is mature. The fibre he considers a failure. It is weak, small in quantity, and very difficult to prepare. I have kept a record of the results so far secured. Mr. Stormont has had no better success. He prepared the fibre in the manner usual for getting fibre from the *ambádi* (Hibiscus cannabinus) after first passing the stems through the rollers of a cane mill. The percentage of fibre, $1\frac{3}{4}$ lbs. per 100 lbs. of fresh stem, was higher than that reported from Saidápet, but a cord broke with a suspended weight of 147 lbs., while a cord of similar weight and thickness of *ambádi* sustained a weight of 330 lbs.

Mr. Woodrow reports that he has sown the seed of what he believes to be a cross between the Manilla hemp and the *sonkel* (or golden plantain, one of the finest species,) on the 12th August. It has not yet germinated; but if it does sprout, the result of the experiment will not be known for five years, the time taken to fruit, when the plant is raised from seed.

### 7. Manilla Tamarind (Inga dulcis).

86. The Collectors of Ahmadabad, Broach, Poona, Sátára, Khándesh, Ahmadnagar, Belgaum, Karáchi and Shikárpur of their own accord procured seed

from the Bhadgaon Farm. The results are in places fair, but hardly worth notice here.

### 8. The Date Palm.

87. (Last Report, para. 115). The suckers of the Arabian Date Palm intended for trial in Gujarát died before they could be sent off. New suckers will not be ready for two years or more.

Dr. Bonavia of Etawah has written a pamphlet on the date palm, and suggested an experiment near Ganesh Khind (Poona), so that irrigation might be available. The use of the plant would be to give a supply of dates in times of failure of ordinary crops. He recommended that seeds and off-shoots should be obtained from the Persian Gulf. Mr. Woodrow, however, reports that eight years ago he purchased dates of the finest quality, and planted the seeds. Many of the plants were distributed. About 100 kept in the gardens at Ganesh Khind are now 10 feet high. These, says Mr. Woodrow, will be valuable for toddy, but there are hundreds of trees in this district in every stage of growth. If seedling trees in this climate would produce good dates, we should have had already dates of local production in our market. It is well known that the best varieties of dates are propagated by off-shoots and not by seeds, and that off-shoots of trees of warranted status are very difficult to procure. When this difficulty is surmounted we shall have to wait many years till the trees mature, and then take a full crop during a famine year only, because it has been proved that a moist atmosphere during the ripening season prevents the proper development of the fruit. In this climate, soil capable of growing dates as described by Dr. Bonavia is also capable of growing sugarcane and mango trees of the finest varieties.

### 9. Pinus Australis.

88. In 1882, seeds of the Pinus Australis, a tree highly prized in America both for building purposes and for the turpentine and resin which it yields, were received from the Secretary of State and distributed in other Presidencies. But the results of the trial were not satisfactory, and this was attributed to want of vitality in the seed caused by the delay which unavoidably occurred between the original collection of seed in America and its resowing in India. A fresh trial was ordered, and in 1885 about 17 lbs. of seeds in a tin-lined deal case were sent to the Bombay Presidency for trial in Gujarát and in the southern parts of Sind, with instructions to sow the seeds immediately on arrival in suitable localities. In Gujarát the Conservator of Forests, N. C., distributed the seeds among the Divisional Forest Officers of north Thána, Surat, Panch Maháls, and the Commissioner of Customs. In the Balsár forest range of Surat and in the sandy parts of Panch Maháls only the seed germinated, and in Balsár the plants were 2 to 3 inches high. In other parts either the seed failed to germinate, or the seedlings died after sprouting. The results of the trial were not encouraging, and the Conservator of Forests recommended that no more money should be wasted in making a further trial. In Sind the seed was sown in three places, but it failed to germinate, except in a plantation where arrangements for regular watering could be made.

### 10. Barilla Plant.

89. This is one of the many plants recommended for diminishing salt in land rendered unfertile by its excess, and also for the reclamation of salt marsh. The seed was distributed largely, but appears to have done well only on the Nadiád Farm. There it was sown in March in a sandy loam, and irrigated till the rains came. The soil is decidedly saltish, and so the water of the well used for irrigation. Whatever seed is secured, will be kept by Mr. Behechardás for trial, sown perhaps as an early rain crop in salt land.

### *C.—Agricultural and Cattle Shows.*

90. Financial pressure has operated as a complete bar to the furtherance of the scheme indicated in para. 131 of last year's Report to establish an annual Provincial show under the auspices and management of the Agricultural Department, to be held in turn in the localities where local shows have secured success.

The principal shows of the year were:—

| Province. | Place. | Prize Money. Rs. | Date. |
|---|---|---|---|
| Deccan ... ... | Ahmadnagar... | 2,000 | 17th November 1885. |
| Southern Marátha Country ... | Chinchli ... | 2,991 | 23rd February 1886. |
| Káthiáwár ... | Wadhwán ... | 2,312 | 1st March 1886. |

The Poona Cattle and Agricultural Show, separated from the Horse Show on account of the unsuitability of the time of the year for the exhibition of cattle and agricultural produce, was not held on account of want of funds. I was only able to be present at the Wadhwán Show. The Nadiád Agricultural and Cattle Show is biennial and will be held in January next, and it is hoped that the Poona Agricultural and Cattle Show will also be possible this year.

*Ahmadnagar Show.*—Government contributed Rs. 600. The prize money was allotted thus: (1) Horses Rs. 1,000. (2) Cattle Rs. 500. (3) Agricultural Produce Rs. 500. The amount actually awarded was a little more than that of the previous year (Rs. 1,856). The best prizes were carried off by horses from the Poona District. It is intended to confine the show to exhibits from the Nagar District. The show was very successful.

*Chinchli Show.*—The show is organized by the Kolhápur State. The funds amounting to Rs. 5,225 were subscribed by the Chiefs of the Southern Marátha States. There was a large increase, notably in the number of oxen and horses. The exhibits were:—

| | Exhibits. | Prizes. |
|---|---|---|
| Horses ... ... ... | 109 | 44 |
| Oxen ... ... ... | 218 | 56 |
| Buffaloes ... ... | 24 | 7 |
| Agricultural Produce ... | 600 | 121 |

Rs. 2,991 were, in all, awarded in prizes. Besides the animals exhibited there was a large collection of cattle and horses brought for sale at the fair, to which the show has been superadded.

Horses, 377
Oxen, 9,723
Buffaloes, 2,400

*Wadhwán Show.*—The funds were subscribed by the Chiefs of Jhálávád Pránt. The allotment for prizes was:—

| | Rs. |
|---|---|
| Horses and Mules ... ... ... | 571 |
| Cattle and Sheep ... ... ... | 417 |
| Agricultural Produce ... ... ... | 738 |
| Machinery ... ... ... ... | 122 |
| Miscellaneous, Dogs, Poultry, &c. ... | 464 |
| Total ... Rs. | 2,312 |

The success of a distribution of the seed of soft white wheat was shown by the exhibits of samples from three States—excellent in character. The steam wheat-thresher was exhibited and attracted attention. The show was under the management of Colonel Nutt, and is the eighth agricultural show which that officer has inaugurated in Káthiáwár. It was largely attended, and gave strong evidence of the interest in agricultural improvement in Káthiáwár.

The question of giving, in lieu of cash, prizes of livestock and implements was raised by the Government of India. (Government Resolution No. 775, dated 16th January 1886). It has been referred for opinion to the Show Committees. The principle involved is good; but I gave my opinion that, as a rule, prize-winners will be able to make a better disposition of the money than the Committees could for them.

*D.—Manufacture of Sugar.*

Sugar refining.

91. Sugar refining has apparently made little progress during the year under report. The refinery at Poona is still closed, though the owner has gained a partial concession, in that he has been allowed to open shops in certain stations for the sale, by the glass, of the rum manufactured.

Date palm sugar.

92. The date palm sugar experiment (last Report, para. 136) has been indefinitely postponed. (Government Resolution No. 9883, dated 8th December 1885). It will be taken up again if a favourable opportunity offers itself, or when the Agricultural Department can provide for due supervision in those tracts where success is likely.

Mowra sugar.

93. The Collector of the Panch Mahâls asked for information as to whether there is possibility of using the mowra (Bassia latifolia) for sugar instead of liquor. The tree abounds in his district and in the neighbourhood. Enquiry showed that this use of the mowra flower is unknown in India.

Sorghum sugar.

94. The efforts to imitate America in the manufacture of sorghum sugar have been described under the section devoted to Agricultural Experiment.

Cane sugar.

95. The Consul for the German Empire having desired information regarding the cultivation of sugarcane and the manufacture of sugar, advantage was taken to collect detailed information from all parts of the Presidency. It is intended, as soon as the compilation is made, to issue a separate paper on the subject, which cannot fail to be of general interest.

96. *Experiment.*—At the instance of the Forest Commission I conducted an experiment in Bassein (North Thána) to show whether there are any peculiar circumstances necessitating the use of wood as fuel for boiling the juice. At Balsár, in Surat, close by, the refuse cane supplemented by thorns and wood is used. At Poona all the *gul* is made with the refuse cane and leaves, useless as fodder. In Khándesh, thorns are plentiful. The crushed cane is a perquisite of the potters, who, after extracting the saccharine matter still left from the rude crushing, use it as fuel for their pottery manufacture. I found that at Bassein, in like manner, the refuse cane is fully utilized, but here as a ráb material for rearing rice seedlings. This justifies the use of wood fuel for *gul* making. I, however, found reason to believe that by the substitution of a shallow for a deep pan much economy is possible. The use of a deep narrow pan is confined to Bassein. I made trial boilings, using in one case the Bassein pan and wood fuel, in the other the Poona pan and only refuse cane. Of the former fuel, 280 lbs. dry and of the latter 220 lbs., also dry, equivalent to 440 lbs. freshly crushed cane, were consumed. The capacity of the Poona pan is $\frac{1}{3}$rd more than that of the other. The comparison may be more clearly stated thus—that for an equal weight of juice the latter requires as large a weight of dry wood as the former does of freshly squeezed cane. The other figures of the experiment are shown marginally. It will be seen that the refuse cane is scarcely sufficient, by this calculation, to boil the juice of the area from which it is taken, but the deficiency can be made up by the dry leaves of the cane as in Poona, or by the addition of thorns or a little wood as in Balsár.

| | Per acre. |
|---|---|
| 1. Number of canes ... ... | 30,000 |
| 2. Weight of canes ready for mill. | $31\frac{1}{2}$ tons. |
| 3. Juice 65 per cent. on weight of cane ... ... ... | $20\frac{1}{2}$ " |
| 4. *Gul* $16\frac{1}{4}$ per cent. on weight of juice... ... ... | $3\frac{1}{3}$ " |
| 5. *Gul* on weight of cane ... | $10\frac{1}{2}$ p. c. |
| 6. Wood fuel, dry, to boil the juice (Bassein pan) ... ... | $12\frac{1}{2}$ tons. |
| 7. Do. of megass, dry, (Poona pan) ... ... ... | $6\frac{1}{4}$ " |
| 8. Do. from an acre of cane ... | $5\frac{1}{2}$ " |

The quality of the shallow-pan *gul* was inferior to that of the deep pan. Some allowance may be claimed for want of skill, for the men I employed were not first-rate boilers, and the Bassein expert specially declared that the deficiency was due to want of skill. This expert valued the local *gul* at $17\frac{3}{5}$ lbs. per rupee,

and that made with the Poona pan at 18⅛ lbs. To test the keeping qualities I kept samples till the heavy rains had passed. This test was again in favour of the Bassein *gul*. When finally sold it fetched a high price, 17 lbs. per rupee, in Poona, where the best *gul* was selling for 20 lbs. But this rate was commanded by the other, which shows that it was good *gul*. The net inference is that, by the substitution of the shallow for the deep pan, economy in fuel is possible—an economy which the dearness of fuel, except at Bassein, has already brought about in other parts of the Presidency. The Bassein pan is of copper and that of Balsár and Poona of iron. The copper pan lasts longer and sells better when worn out than the iron one. But there is no reason why the copper pan should not be made shallow. It would then resemble that used in Kánara. I have hope that the lesson in economy here indicated will soon be taught to the Bassein sugar-boilers. Mr. Navroji, the apprentice on the Bhadgaon Farm (see Farm Report for 1885-86, para. 98) has with my full consent resolved to introduce an improved mill which he has seen so successfully worked at the farm, as will be shown further on (see para. 105). He will have to provide pans to keep the boiling up to time, and he intends to use the shallow pattern. There is little doubt, I think, that he will succeed, and in doing so the necessary lesson will be inculcated.

*E.—Ensilage.*

97. I have personally made no further experiment in ensilage. The small appreciation shown by the Military Department noticed last year and the financial pressure have deterred me from asking for funds.

At the Bhadgaon and College of Science Farms, ensilage has made good progress; and experiments have been made at Belgaum and in Kánara.

98. Mr. Stormont had 5 silos and has fed 700 cwts. of silage to the farm cattle, leaving one silo still untouched. The proportion between the outturn and the green stuff pitted shows a wastage of 47 per cent.—a proof that as yet, as he himself readily admits, there is something wanting. He does not find the cost of production so low as the usual estimates would make it, and thinks that silage is as yet only shown to pay when good cattle are to be kept.

99. I noticed last year the experiments made by Mr. Woodrow at the College of Science Farm, (last Report, para. 156). The black soil silo was opened in March 1886, or 21 months after the filling. The stuff (grass) had kept excellently, and was used as fodder for the farm cattle up till the 30th May. This is a proof of the power of keeping ensilage throughout two rainy seasons. This year Mr. Woodrow has filled another silo (contents 3,840 cubic feet) with jowári cut flowering at the end of August. The jowári was an early variety. By cutting it thus early there will be plenty of time to prepare the land thoroughly for a rabi crop.

100. A fairly successful experiment was made by the Agricultural Instructor of the High School Class at the Belgaum High School. There was considerable loss on the sides and top. The silage was mostly eaten by the cattle of the demonstration farm.

101. Three silos were opened in Kánara in the last two years—one at Belikeri in March 1885. Here the stuff had not kept well on the sides and at top and bottom, but the central portions were quite sound, moist, green and with a good smell. When taken out, the silage was dried and weighed. It was found to weigh 2 tons. 10 tons of green grass had been silaged. I think it a mistake to dry the silage. At Sadáshivgad and at Kárwár the results were not more satisfactory than at Belikeri.

102. These results point to the presumption that success with katcha silos is not easy to secure. I personally am not yet convinced of their merit, except when under experienced management.

103. Colonel Caldecott, Superintendent Gunpowder Factory, who assisted me in my first experiment in 1883, has continued to make and use silage. He has made sweet silage successfully. The silo was filled in November 1885. A layer of grass, 3 feet deep, was first put in and left uncovered till the tem-

perature rose to 126° F. This point was reached in 48 hours. Other similar layers were then added till the silo was filled. Each layer after the first heated to the required temperature in 24 hours. Weights of 150-180 lbs. per square foot were finally placed. The temperature of the mass gradually decreased to 96° F. in 6 weeks and then remained stationary. The silo was opened in February 1886. The silage was good and sweet. Cattle ate it greedily. Some horses would not, and there was no opportunity of teaching them to like the new food. Colonel Caldecott's own horses throve on the silage throughout the hot weather, and kept in excellent condition.

Another experiment was tried with the object of lessening wastage. Instead of uncovering a small portion and cutting down perpendicularly to the bottom, the plan of uncovering all was tried, the ensilage being taken day by day in layers from the whole surface. The result was not satisfactory. The wastage was greater than before. Colonel Caldecott's experiments are valuable.

*F.—Improved Agricultural Implements.*

Threshers.

104. The steam wheat thresher has been discussed under the wheat section. The Gujarát machine, referred to in para. 160 of last Report, has been made over to Mr. Woodrow for trial. He has formed a high opinion of its merits, but wishes to reserve his final opinion till he has had a further trial this season.

Sugar mills.

105. The Poona 3-roller sugarcane mill has been patented, and a competitor has arisen, who has set up a large factory in opposition to Mr. Subráo, which goes to prove the local estimate of the invention, though it has caused a law suit. Attention has been drawn by the trials made. Four mills were sent to Ahmadabad, where it is reported they fetch Rs. 2 hire a day. The Bihia mill was sent to several parts of the Presidency by the Bombay agents. From Bársi a favourable report has been received. At the Bhadgaon Farm, where Mr. Stormont exhibited the mill and tried to find purchasers, it has been cast into the shade by the great appreciation won by the McOnie mills on the farm. These are horizontal mills with 3 rollers; one large one with rollers 16″ in diameter cost Rs. 1,000; the others with 12″ and 8″ rollers costing Rs. 700 and 500 respectively, of which the latter was made on McOnie's muster in England by W. Nicol & Co., Bombay. The latter only differs from the McOnie mill in an improved adjustment of the driving wheel. Trials showed these mills superior to the Bihia and Poona mills (Khándesh Farm Report, 1884-85, paras. 66 to 68). The McOnie mills were brought out for the Broach Exhibition as far back as 1868. They were purchased there by the Máheji Exhibition Committee. The Nicol mill was afterwards purchased for the farm. It was a long time before the mills were set up properly, and a still longer time before local prejudices were overcome. The two smaller ones have been hired out, and have in the last year alone fetched a net income of Rs. 335—an ample proof both of the need of improved mills and of the success of the improvement tried. It was my intention of asking for sanction to purchase some more of these mills, but private enterprize came in. Mr. Navroji Manekji has undertaken (see para. 95 above) the work of extension. He has had mills made up on McOnie's muster in Bombay at a cost of Rs. 400 each, and will this season work them on his own account in various districts. I think the success of these mills shows that the people, though slow, are amenable to improvement, and that the instrumentality of Government farms is indispensable. The steam engine, which is part of the wheat-threshing machinery lately purchased for the farm, will be used this season to work the large McOnie mill at the farm.

Ploughs.

106. As stated last year, several of Massey's ploughs have been tried in this Presidency, but no success worthy of note has been attained. The only reason is, that there are not yet men trained to work an iron plough. The plough which Mr. Stormont made up at the works of Messrs. Ransomes, Sims and Jefferies at Ipswich, which has been named the "Rokra" plough after the farm, is found very useful. I bought 12 during the year with spare parts. The cost, landed in Bombay, was Rs. 30 a piece—a cost capable of great reduction if locally made. The Bhávnagar and Gondal State School Farms have each taken one for experiment, and so the District Local

Fund Board, Sholápur. Four were sent for trial to the Haidarabad Farm, and the rest are used by the Bhadgaon Farm, where an outside demand also has arisen. Mr. Strachan finds the stilts too short, and remarks that the implement-makers at home do not give the Sindi credit for his height. He, however, does not altogether approve of the plough, which he considers too heavy for the Sind cattle Mr. Woodrow has worked a large plough, received from the Secretary of State, of which the price is not known. It has a rotary mould board, and has worked excellently with 3 pairs of good beasts. This implement is useful with skilled supervision. It breaks up heavy land beautifully, and makes a clean furrow, the rotary mould board having the effect of cleaning the sticky black soil and preventing clogging.

Bone Mill.

107. This mill was similarly procured for the College of Science Farm. The working has been very successful. It crushes bones (but not horns) to what are called "one-inch bones" at the rate of 1 ton a day worked by 4 bullocks. The remarks made by Mr. Woodrow are worthy of reproduction here :—

(1). The chief event of the year is the arrival of a number of agricultural machines kindly supplied by the Secretary of State for India, including a Bone Mill, thresher, chaff-cutter and winnower, with a bullock power for driving the machines.

(2). In our circumstances the most important machine is the Bone Mill. The one supplied crushes fresh or dried bones into pieces not more than 1 inch diameter when worked by four bullocks at the rate of 1 ton daily. I expect to be able to bring those pieces into a soluble form by fermenting the crushed bones by means of decaying stable litter.

(3). The 1-inch pieces of bones are larger than have yet been reduced by fermentation within a reasonable time; but as the bones are, for the most part, fresh, and contain much organic matter and water, I hope to be able to report success. Three tons are at present in the fermenting pits, and I expect to greatly increase the quantity immediately.

(4). Bones can be purchased here at present at Rs. 14 per ton, and if the crushing and fermenting can be done for my estimate Rs. 6 per ton, the manure will be very cheap.

(5). The subject of bone-crushing is of extreme importance for the agricultural advancement of this country, because, as is well known, bones contain, weight for weight, 17 times as much valuable manure as good cowdung, while the selling price of bones uncrushed in this district is not more than three times the price of cowdung.

(6). It is also well known that there is no special deposit of phosphatic mineral available for manure in the Bombay Presidency. Yet Bombay exported to British ports, in 1884, bones for manure to the value of £99,248. If this continues many years, the result will be a serious diminution of the small proportion of phosphates existing in our soils, and consequent exhaustion and sterility.

(7). The obvious remedy is—crush the bones and return them as manure to the soil they came from, and I believe it will ultimately be highly profitable for Government to supply the farm with a powerful bone-crushing mill capable of grinding bones to "meal", and the necessary power to drive it.

Last year I described another process for utilizing bones as manure (last Report, paras. 139-141). I regret that Mr. Cooke has not been able to push his new manure into notice.

108. It will be seen, from the extracts taken from Mr. Woodrow's report on the College of Science Farm, that several other implements are under trial. The results will be watched. The short American scythe, which Mr. Woodrow found so useful last year in cutting bájri and again this year jowári for ensilage, was sent to the Haidarabad Farm for trial. It was fairly successful with wheat there; but, as the wheat is irrigated and grown in beds, its merits are not yet admitted.

109. I have made a useful collection of all the principal implements of husbandry in use in this Presidency. The larger ones are represented by models. The collection was made for the Indo-Colonial Exhibition, but I have kept duplicates for my own use.

A special report has been made, during the year, regarding the varieties of small hand implements, such as axes, bill-hooks, reaping hooks, and the like, with the object of ascertaining whether the use of better material without alteration of shape cannot be effected. Samples were sent to Messrs. Bushby & Co., who will, no doubt, study the feasibility of improvement.

*G.—Value of Jámbhul (Eugenia Jambolana) in ridding tanks and wells of moss.*

110. I noticed this subject last year (para. 163). Experiments have been made in the Kánara and Dhárwár Districts. Earthenware vessels were filled with the water of wells and tanks infested with the moss. Into one set, chips of the bark of the jámbhul were introduced, with the result that the moss blackened and died in three days. In the other the moss kept its vitality and colour. Further experiments in Kánara corroborate former results, but it was found that the moss re-appears after a time (about three months).

VI.—CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

*A.—Improvement in the Meat Supply.*

111. Last year I quoted at length the recommendations of the Commissary General on the subject of improving the mutton and beef supply in quality as well as in quantity. I have placed myself in communication with that officer, and have by his courtesy obtained promises of facilities for conducting experiments at the Commissariat Farm of Alegaon near Poona. As no final scheme has yet been submitted to Government I merely note the fact here, that the subject has not been neglected, but is in a fair way of receiving special attention. Special attention is not only called for by the representations of the Commissariat Department, that the danger of a meat famine is not to be overlooked, but also by the increased efforts of the Forest Department to improve conservancy. The rigorous exclusion of sheep and goats from lands set apart for forest is insisted upon. Such exclusion, however necessary in the interests of forest conservancy, must naturally act in the direction of still further diminution of the meat supply. Sheep are most valuable auxiliaries to arable farming, but cannot be kept to arable lands as in England; for here we have no substitute for roots which form the food there of sheep penned on arable land. Sheep are pasture fed. The exclusion from forest lands may be, I think, carried too far. Sheep and goats must be excluded from conserved areas planted with young seedlings to secure any result at all in reboisement. Goats are more harmful than sheep, but the latter cannot be kept without a certain, though small, admixture of goats to lead the way. But neither sheep nor goats can reasonably be excluded from pasture lands or from well-established forests. Sheep form the safest stock for a rayat to keep showing a power of eking out a subsistence when other stock die of starvation. Mr. James Strip of Ahmadabad (Government Resolution No. 9431, dated 23rd November 1885) has given an account of some interesting experiments carried out by him. These practically were keeping sheep on arable land, feeding them chiefly on bábhul pods, in the same way as sheep are fed on roots in England. He reports that he succeeded in bringing sheep up to 70 lbs. dead weight, and found the business a profitable one. He does not anticipate a mutton famine, pointing out that the extensive jungle and grazing lands of Márwár can breed sheep for the whole Presidency. He advocates the cross between the Gujarát and the Deccan sheep. I have no doubt that the extension of bábhul cultivation in set areas, which I have strongly advocated, will go a large way to increasing the food supply requisite to keep up the flocks of the country and to increase their numbers.

*B.—Pony Mares for Field Work.*

112. The General Superintendent of Horse-breeding has during the year advocated the substitution of pony mares for bullocks in agricultural work. His object is to foster the breeding of mules, and he urges that the success obtained at the Babugarh Depôt proves the feasibility of his recommendation. The subject was fully discussed. It would be, in my opinion, useless to use ponies to plough anything except light land, of which the Bombay Presidency has comparatively little. They might be used for horse-hoeing and light-carting. But there is no chance, I think, of inducing the rayat to make even a trial, till the possibility of profit from mule-breeding and of the substitution, in part, of ponies for bullocks are practically demonstrated. I have offered to make a trial on the Bhadgaon Farm if mares are supplied. The question of experiment was put before the Chiefs of Káthiáwár. It was not encouraged.

*C.—Civil Veterinary Department.*

113. The Bombay Veterinary College and Hospital was opened, in July last, under hopeful circumstances. The management of the college has been entrusted to a Committee of 12, to which I have been nominated a member. The Poona Veterinary Hospital is being built. But a question of greater importance to the Agricultural Department has arisen during the year, and that is the organization of a Civil Veterinary establishment to be attached to the Agricultural Department. I found ample reason to support the proposal, and I believe that, but for the financial pressure, some such scheme as the following would have been by this time accomplished. I quote the remarks made by me, for they express the opinion I hold on the subject and the action which I consider desirable :—

The supervising staff of the Agricultural Department will be largely recruited from the College of Science (Agricultural Branch). For this and other reasons the proposal to organize the Civil Veterinary establishment as a branch of the Agricultural Department is justified. But the principle already thoroughly established as regards the general action of this Department must necessarily be made applicable to the Veterinary Branch, *viz.*, that enquiry must precede all attempts at improvement. In the first place, time must be given to educate competent subordinates. Again, enquiry is essential to ascertain the nature of the staff required and the duties which it can undertake. But the earlier enquiry begins the better. It is proposed, therefore, that the services of a competent Veterinary Surgeon, with experience as to the treatment of cattle-disease if possible and some knowledge as to breeds of cattle, should be placed at the disposal of the Agricultural Department.

*First,* he should systematically tour through the rural districts, taking every opportunity of being present at horse and cattle shows to collect information as to the different breeds of cattle, their respective merits, points, and defects. Much useful information on this head has already been collected through Revenue officials, which will be a general guide. He should carefully study the various cattle-diseases, ascertaining native names, symptoms, and characteristics, and should intimately acquaint himself with the local treatment of disease, both preventive and remedial, and the arrangements made by the agriculturists themselves to mitigate or check the extension of epidemics.

*Secondly,*—Concurrently with such enquiry he should systematically compile the information collected in a form which would be useful for veterinary students both at Bombay and Poona. After a time the notes will be capable of incorporation in handbooks in the vernaculars, which should also contain suggestions which professional knowledge may make safe and workable for circulation among Native officials and local bodies and even among the more intelligent of the agriculturists themselves.

The staff of the Agricultural Department would naturally be utilized by the Veterinary Surgeon in his tours, and he would commence his enquiry in districts where that staff has been organized. He would certainly be unacquainted with the vernaculars, and would absolutely need the assistance of the members of this staff as interpreters, especially as it would be generally, if not always, possible to place at his disposal men who already know a little about the subject of enquiry.

*Thirdly,*—He would especially proceed to districts visited by epidemics of cattle-disease, both as a means towards collecting at the most favourable time information as regards the customary action of the people themselves, and also to take such measures for the suppression or localization of the epidemic as may be feasible.

All this work is an essential preliminary to the formation of a regular Civil Veterinary Department. It is work which cannot be done except by a professional man, and work which will show how far the recommendations of the Commission of 1869 can be dealt with at once and how far they must be postponed. For instance, without such enquiry it is impossible to say whether the country is ripe for such legislation as the Commission recommends.

It may here be anticipated that perhaps the full time of such an officer would not be utilized with advantage. If this is found to be the case, which is very doubtful, the Veterinary Surgeon could very profitably be called upon to give a special course of lectures, either in Bombay or Poona, to the veterinary students, in amplification and explanation of the facts compiled with regard to native methods of dealing with disease and the like. Such lectures would in no way clash with the lectures of the regular course, and would be of great value both to the students themselves and to their teachers of theoretical and practical knowledge.

It will be time when the Veterinary Surgeon has traversed the provinces to prepare a scheme for the location of native veterinary agency in suitable places. Again, by the time the scheme is matured, the services of suitably trained subordinates will be available. These may either be added to the strength of the supervising agency of the Agricultural Department or incorporated (if their training has been secured at the Agricultural College) with that agency to be specially available for dealing with epidemics, but generally to carry on the regular duties of the staff.

*D.—Cattle-Disease.*

114. Another question of importance was decided during the year, and that is that legislation to prevent cattle-disease is inexpedient or, at any rate, premature in India. The District Officers were nearly unanimous in opposing legislation as calculated to be vexatious and ineffective. Government concurred that there is insufficient knowledge on the subject and as yet no adequate agency for the treatment of disease to justify legislation.

The subject of cattle-disease calls for a few remarks. Rinderpest broke out in the Ankola Táluka of Kánara in June 1886. After a slight cessation it appeared again in other parts of Kánara and in the districts of Bijápur, Dhárwár and Thána. There is little doubt that the disease is rinderpest and identical with the Steppe plague or murrain of Europe and Russia, and that it is highly infectious and destructive (Report on Indian Cattle Plagues in 1871, pages xvii-xxvii). The opinion of the authors of this report was based on enquiry, which elicited, among other facts, proof that rinderpest was the disease which caused a death-rate of 68 per cent. on attacks in Kánara in 1869. Mr. Steel, the Superintendent of the Bombay Veterinary College, deputed an assistant to Kánara and Dhárwár. Full details are not yet available; but it seems clear that the attacks in the various tracts noticed were not communicated from one place to another by contagion. Similar causes rather operated in various places. Mr. Price in Dhárwár has collected some valuable information which I shall report when all details are available. He found that isolation was not resorted to, but diseased cattle were allowed to drink from the tanks used by other cattle and the people themselves.

*E.—Denaturalization of Salt.*

115. No discovery has yet been made of a method of denaturalizing salt so as to cheapen it as a cattle condiment; and the reward of Rs. 5,000 offered by the Government of India is yet unwon. It has been said that the idea of denaturalizing salt to make it fit for cattle, but not for man, has been suggested by the success obtained in the case of methylated spirits. Here it was desirous to make alcohol available for the arts without loss of excise revenue. This was done by making the alcohol unfit as a liquor by the simple admixture of a small percentage of methyl alcohol. The analogy between this discovery and that hoped for in the case of salt is close, but the similarity gives very little hope of success with salt.

VII.—AGRICULTURAL AND FISCAL STATISTICS.

116. Returns of agricultural statistics were compiled for 1884-85 according to the orders of the Government of India on the proposals of the Agricultural Conference of 1883, and were submitted for transmission to the Secretary of State at the end of December. The agricultural returns were approved by the Government of India; but the fiscal returns, which are received from the Divisional Commissioners and submitted by me with the agricultural returns, were incomplete. These last necessitated the appointment of a Committee, consisting of the Divisional Commissioners, to discuss the several points raised. The subject is being considered by the Committee.

*A.—Agricultural.*

117. This is the first time it has been possible to show the Agricultural Statistics of the Presidency in the Annual Report of the Agricultural Department, which is due for submission to Government on the 1st November, the date also fixed by the Supreme Government for the submission of the Statistical Returns. Last year the returns were compiled in my office, but were not received from the Collectors in time for inclusion in the report.

Owing to a resolution of Government in April last, this report, with the Statistics of agriculture and rainfall, will be made public after perusal by the Secretary to Government. The Statistics will, therefore with the experimental results on the Farms, be published considerably earlier than usual.

118. The bulk of the published report has been greatly reduced by the omission of the tálukávár details. These are, however, carefully kept in my own office for my own reference and for disposal of references from any one desirous of such detail. On the other hand, more detail is given with the object of classifying Statistics according to varying grades of accuracy. Thus

the returns from surveyed Government rayatwári villages, which are the most accurate, inasmuch as such villages not only keep the forms prescribed by the Village Manual, but the forms are filled by accountants directly under the táluka authorities, are shown separately from those of other Government villages, which include villages held on tenures other than rayatwári, where the responsibility of the forms does not altogether rest with the accountants, but rather with the holders, who are not so directly under authority. The accuracy of these latter returns is thus considerably less than that of the former. But, again, they are more accurate than those from surveyed alienated villages; for though these, as far as shown in the returns, keep the prescribed forms, they are to a still less degree under command than the holders of Government villages. All other villages. *e.g.* unsurveyed Government and alienated villages or surveyed alienated villages, which do not keep the prescribed forms, are excluded on the ground that the statistics they can present are too incomplete and too uncertain for publication. The division of more trustworthy Statistics from those less trustworthy or not at all worthy of reliance is thus complete, and a great gain in the direction of improvement is secured.

119. It will be noticed, and perhaps with regret by some, that no comparison between the figures of the year under report is attempted with those of the previous year. Such a comparison would be irrelevant and misleading, as will be readily admitted; for as the classification above referred to was not made, the area with which the figures of previous years deal is uncertain and variable.

120. The returns now submitted bear evidence of greater care in compilation, and a closer attention to the requirements of the prescribed forms and explanatory memoranda than heretofore. They were for the most part also submitted more punctually. I would earnestly ask for attention to punctuality, for due time has not been given me for referring back questions of doubt or uncertainty. This point will be more essential next year when comparison will be attempted. With the new village forms of the Revised Manual, in which earlier though even more convenient dates than heretofore have been laid down for submission of village and táluka returns, punctuality will be easily ensured, and should be insisted upon.

I propose very briefly to review each return.

*Return No. 1.—Area of Available Statistics.*

121. The inclusion and exclusion of villages have been more carefully made. Sátára last year included a large area of alienated unsurveyed land for which the statistics were undoubtedly the purest guess-work. This year these have been freely excluded. So Ahmadnagar and Haidarabad, where there were no exclusions, show more appreciation of the standing orders. On the other hand, the exclusions in Ahmadabad, which amounted last year to about half the district, are now entirely eliminated. As all villages have been surveyed, the action taken appears to be correct, for the grading of the villages separates the superior from inferior Statistics.

Of the total Government villages included in the Presidency proper, 17,476 are surveyed rayatwári and 1,440 other Government villages. The latter are found in large numbers in Ahmadabad 384 Tálukdári and Mehvási; Khándesh 317 probably held on lease; Kolába 500 settled Khoti villages; Kaira 90 held on the Narva tenure; Panch Maháls 78 probably Tálukdári; and Ahmadnagar 61½, which are apparently chiefly Sarákati, *i.e.* held partly by Government and partly by alienees. Besides these, 6 Surat villages are Sarákati and 3 in Thána held by Khots.

122. The excluded Government villages are found chiefly in Kaira 37 held on the Tálukdári and Udhad Jamábandi tenures; Panch Maháls 108½ Tálukdári and on lease and 53 unsurveyed belonging to the Nárukot State which have now been treated as Government villages; Khándesh 231½, probably all leased villages, and Kánara 191 unsurveyed rayatwári. As regards Ratnágiri, where most of the villages are Khoti, it has been found necessary to exclude the whole district, because the reports do not separate the various classes with accuracy. A small portion only is rayatwári.

The gross area is slightly incorrect. No area, even approximate, is given for

(1) 53 (Nárukot) villages of Panch Maháls.
(2) 70 villages in Khándesh (39 in Taloda and 31 in Shirpur).

A similar omission was apparent in the returns of Kánara for 191 villages; but it has been found possible to enter in Form I. an approximate estimate of area not possible for the Panch Maháls and Khándesh, because these are intermingled with native territory.

As regards Sind, all villages returned as Government villages have been entered in my office as rayatwári; whether correctly or not it cannot be ascertained, for the returns were prepared in the old forms where classification is absent. A very large area of Government villages is excluded in Sind, chiefly because the unsurveyed area is very large. The Thar and Párkar District is wholly unsurveyed, and more than half Karáchi and Upper Sind Frontier.

As regards exclusions of non-Government villages, nothing need be said. As a rule, surveyed alienated villages have been included and others excluded.

*Return No. 2.—Cultivated and Uncultivated Area.*

123. The cultivated area is the occupied area *plus* such area of unoccupied land as has been during the year cultivated by authority, or is held on a lease for a number of years. Most of the unoccupied area, which is cultivated, is unassessed, and shown in column 7.

The cultivated area includes also the area of current fallow. The expression is only approximately accurate, for it includes occupied land, which is never cultivated, and not only fallow in its proper sense. It, however, excludes unassessed portions of occupied land (Pot Kharáb) which are classed as uncultivated.

124. I here give a statement which summarizes the figures of Returns Nos. 1 and 2 in a convenient form:—

| DISTRICT. | Percentage on Gross Area of Area for which Statistics are not available. | Percentage on Net Area for which Statistics are available, of Areas. | | | | |
|---|---|---|---|---|---|---|
| | | Cultivated. | | Uncultivated. | | Forest. |
| | | Actually cropped. | Current Fallows. | Available for Cultivation. | Not available for Cultivation. | |
| **A.—Presidency Proper.** | | | | | | |
| *I.—Gujarát.* | | | | | | |
| 1. Ahmadabad... ... ... ... | ... | 54 | 23 | 4 | 19 | ... |
| 2. Kaira ... ... ... ... | 9 | 75 | 4 | 9 | 12 | ... |
| 3. Panch Maháls ... ... ... | 26 | 32 | 12 | 41 | 9 | 6 |
| 4. Broach ... ... ... ... | 2 | 60 | 9 | 4 | 27 | ... |
| 5. Surat ... ... ... ... | 3 | 47 | 24 | 7 | 18 | 4 |
| Average ... | 6 | 56 | 17 | 9 | 17 | 1 |
| *II.—Deccan.* | | | | | | |
| 6. Khándesh ... ... ... ... | 7 | 55 | 5 | 18 | 12 | 10 |
| 7. Násik ... ... ... ... | 4 | 54 | 11 | 9 | 10 | 16 |
| 8. Ahmadnagar ... ... ... | 2 | 63 | 10 | 5 | 10 | 12 |
| 9. Poona ... ... ... ... | 1 | 61 | 11 | 2 | 15 | 11 |
| 10. Sholápur ... ... ... ... | 3 | 72 | 11 | 5 | 9 | 3 |
| 11. Sátára ... ... ... ... | 4 | 60 | 14 | 2 | 10 | 14 |
| Average ... | 4 | 60 | 10 | 8 | 11 | 11 |
| *III.—Bombay Karnátak.* | | | | | | |
| 12. Belgaum ... ... ... ... | 1 | 60 | 12 | 6 | 7 | 15 |
| 13. Bijápur ... ... ... ... | 1 | 72 | 9 | 9 | 6 | 4 |
| 14. Dhárwár ... ... ... ... | 3 | 71 | 9 | 3 | 7 | 10 |
| Average ... | 1 | 68 | 10 | 6 | 6 | 10 |
| *IV.—Konkan.* | | | | | | |
| 15. Thána ... ... ... ... | 2 | 21 | 20 | 8 | 24 | 27 |
| 16. Kolába ... ... ... ... | 2 | 33 | 21 | 8 | 28 | 10 |
| 17. Ratnágiri ... ... ... ... | 100 | ... | ... | ... | ... | ... |
| 18. Kánara ... ... ... ... | 14 | 10 | 4 | 2 | 18 | 66 |
| Average ... | 34 | 20 | 14 | 6 | 23 | 37 |
| Average for the Presidency Proper ... | 9 | 55 | 11 | 8 | 13 | 13 |
| **B.—Sind.** | | | | | | |
| 19. Karáchi ... ... ... ... | 59 | 13 | 14 | 16 | 53 | 4 |
| 20. Haidarabad... ... ... ... | 37 | 14 | 25 | 44 | 17 | ... |
| 21. Shikárpur ... ... ... ... | 29 | 20 | 17 | 34 | 20 | 9 |
| 22. Upper Sind Frontier ... ... ... | 57 | 20 | 33 | 33 | 9 | 5 |
| 23. Thar and Párkar ... ... ... | 100 | ... | ... | ... | ... | ... |
| Average ... | 62 | 16 | 21 | 35 | 24 | 4 |
| Average for the Presidency ... | 27 | 49 | 13 | 12 | 15 | 11 |

The table speaks for itself. The backwardness of such districts as Panch Maháls, where 40 per cent of the area is still available for cultivation, and Khándesh, is well shown by the table, as well as the very small area still to be taken up in other districts except Sind. Current fallows must be explained as far as possible, though in the explanation offered I am drawing partly on surmise. In Ahmadabad it would seem that the area of current fallows is only very large in other Government, that is, Tálukdári villages. The surmise is that as the Tálukdárs pay for all land whether occupied or not, that area which would properly come under column 10 of Form No. 2, available for cultivation, is entered under current fallow. This remark applies also to the Panch Mahál Tálukdári area and the Narva area of Kaira. In these cases the revenue definition of occupied area makes the difference between the cultivated and the occupied area much larger than would appear from the definition above given. In Surat, as explained in the special report on Agricultural Statistics last year, the large percentage of current fallow is due to the extensive area kept under grass. In Thána and Kolába it is due to the conditions of local dry-crop cultivation on uplands which require long fallows properly so called, and where the column includes occupied land set apart for the growth of material for ráb. Such fallows are also large in all the Deccan Districts except Khándesh and in Belgaum of the Karnátak in hilly tracts. Sholápur appears to call for another explanation. A reference to the rainfall table will show that the large area of fallow was due to the non-sowing of the kharíf lands owing to bad early rainfall.

*Return No. 3.—Crops.*

125. To facilitate a study of the detailed figures which are given in the Returns, I here enter a table of percentages, which shows at a glance the area under food and export staples :—

*Percentage of Food Crops and Non-Food Crops on Gross Area Cropped.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse Grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Presidency Proper. | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 21 | 15 | 6 | 18 | 3 | 1 | 64 | 8 | 1 | 24 | 3 | ... | 73 | 27 |
| 2 | Kaira ... ... ... ... | 11 | 28 | 16 | 3 | 23 | 2 | 83 | 9 | 1 | 1 | 2 | 4 | 93 | 7 |
| 3 | Panch Maháls ... ... ... | 1 | 15 | 17 | 1 | 10 | 28 [Maize] | 72 | 17 | ... | ... | 10 | 1 | 89 | 11 |
| 4 | Broach ... ... ... ... | 19 | 2 | 5 | 16 | 1 | ... | 43 | 10 | 1 | 44 | 2 | ... | 54 | 46 |
| 5 | Surat ... ... ... ... | 21 | 1 | 20 | 6 | 10 | ... | 58 | 15 | 2 | 17 | 7 | 1 | 75 | 25 |
| | Average ... | 17 | 14 | 11 | 11 | 8 | 4 | 65 | 10 | 1 | 19 | 4 | 1 | 76 | 24 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 19 | 22 | 1 | 12 | 1 | ... | 55 | 7 | ... | 23 | 13 | 2 | 62 | 38 |
| 7 | Násik ... ... ... ... | 5 | 37 | 2 | 17 | 11 | 1 | 73 | 11 | 1 | ... | 15 | ... | 85 | 15 |
| 8 | Ahmadnagar ... ... ... | 38 | 33 | ... | 11 | 1 | 1 | 84 | 8 | ... | 1 | 6 | 1 | 92 | 8 |
| 9 | Poona ... ... ... ... | 39 | 31 | 3 | 5 | 5 | ... | 83 | 6 | 2 | ... | 8 | 1 | 91 | 9 |
| 10 | Sholápur... ... ... ... | 67 | 8 | 1 | 3 | ... | 1 | 80 | 6 | 1 | ... | 11 | 2 | 87 | 13 |
| 11 | Sátára ... ... ... ... | 28 | 31 | 2 | 4 | 7 | 2 | 74 | 16 | 1 | 1 | 4 | 4 | 91 | 9 |
| | Average ... | 33 | 27 | 1 | 9 | 3 | 1 | 74 | 9 | 1 | 5 | 10 | 1 | 84 | 16 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 44 | 8 | 6 | 5 | 4 | 6 | 73 | 11 | 1 | 8 | 5 | 2 | 85 | 15 |
| 13 | Bijápur ... ... ... ... | 60 | 10 | ... | 6 | ... | 1 | 77 | 7 | 1 | 6 | 8 | 1 | 85 | 15 |
| 14 | Dhárwár... .. ... ... | 33 | ... | 7 | 11 | 6 | 1 | 58 | 11 | 1 | 23 | 4 | 3 | 70 | 30 |
| | Average ... | 47 | 6 | 4 | 7 | 3 | 3 | 70 | 9 | 1 | 12 | 6 | 2 | 80 | 20 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 62 | ... | 22 | ... | 84 | 9 | 1 | ... | 4 | 2 | 94 | 6 |
| 16 | Kolába ... ... ... .. | ... | ... | 53 | ... | 35 | 3 | 91 | 6 | 1 | ... | 2 | ... | 98 | 2 |
| 17 | Ratnágiri ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 18 | Kánara ... ... ... ... | 1 | ... | 80 | ... | 2 | ... | 83 | 3 | 13 | ... | ... | 4 | 96 | 4 |
| | Average ... | ... | ... | 63 | ... | 24 | ... | 87 | 6 | 3 | ... | 3 | 1 | 96 | 4 |
| | Average A ... | 33 | 18 | 6 | 8 | 5 | 2 | 72 | 9 | 1 | 9 | 7 | 2 | 82 | 18 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | 15 | 4 | 42 | 16 | ... | 2 | 79 | 8 | 1 | ... | 11 | 1 | 88 | 12 |
| 20 | Haidarabad ... ... ... | 18 | 38 | 7 | 6 | ... | 1 | 70 | 3 | 2 | 12 | 11 | 2 | 75 | 25 |
| 21 | Shikárpur .. ... ... | 17 | 1 | 37 | 20 | ... | 1 | 76 | 13 | 2 | 1 | 7 | 1 | 91 | 9 |
| 22 | Upper Sind Frontier ... ... | 42 | 2 | 6 | 7 | ... | ... | 57 | 5 | 1 | 1 | 35 | 1 | 63 | 37 |
| 23 | Thar and Párkar ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Average B ... | 19 | 13 | 26 | 14 | ... | 1 | 73 | 8 | 2 | 4 | 1 | 12 | 83 | 17 |
| | Average for the Presidency... | 32 | 18 | 7 | 9 | 4 | 2 | 72 | 9 | 1 | 8 | 8 | 2 | 82 | 18 |

I omit comment on the table with the remark that I propose next year to consider whether these percentages should not be worked out on the area from which superior Statistics are available only, and not on the total area for which statistics good, fair and poor are forthcoming.

I would remark how important the table shows the coarse food-grains to be, such as *kodra* in Kaira and *nágli* and *varai* in the Konkan.

A marked improvement in compilation is evident. Whereas last year the area of crops relegated to the indefinite but convenient head of "Others" was very large. The care taken by the Collectors to eliminate the column as far as possible has been very successful. In Bijápur and Dhárwár the elimination is almost complete. The Circle Inspector staff of those districts naturally gave the Collectors valuable assistance. The list of crops to which special columns are assigned, is sufficiently large to warrant almost entire elimination, except in exceptional cases.

In the Sholápur District alone a large area is devoted to "Others" in nearly all classes, as a reference to the Returns will show. Nearly 2 lákhs of acres under oil-seeds are thus indefinitely shown; but as the columns for safflower and ground-nut, both largely grown, are blank, it is clear that some misconception, which could have been avoided, was existent. Time for reference has not been given to clear off the point.

I must admit, however, that the returns are really less accurate than they appear to be; for, except where the Circle Inspector staff supervises the registration of Crop Statistics, it is certain that row crops and second crops after reaping of the principal crop are in the one case shown under the area credited to the principal crop and in the other largely neglected. The details of the various crops which come under the class "Orchard and Garden Produce" are only available from Bijápur and Dhárwár, where only the revised forms of the Manual were filled in tentatively to test their fitness. The experimental test of the new forms was very satisfactory, and it was this test which enabled me to recommend the introduction of the Revised Manual throughout the Presidency so early as the 1st August 1886. Next year the returns will necessarily be more uniform and complete. It is hoped that in Sind it will be found possible to imitate the example of the Presidency.

126. I have not attempted to reproduce the anna valuations of outturn of each of the principal crops, and it would have been very rash to have attempted any calculation of gross outturn. I have stated above (para. 78) that I have found reason to ask for the withdrawal of the formulæ designed for the estimation of outturn; but the new Manual contains what I consider a workable substitute, which will justify the entry, next year, of anna estimates of yield of each of the principal crops, though it will be some time before it will be safe to go further and make calculations of the gross outturn of even the most important products of the Presidency. The general characteristics of the season, for which the crop statistics are given, may be, however, gleaned from the analysis of the rainfall.

*Return No. IV.—Irrigation.*

127. This return has been submitted. It is a new return beset with difficulties, and is given for what it is worth. In Kánara the whole area of cropped land is returned as irrigated—an evident error, which cannot now be rectified In Bijápur the return is confined to the Government villages.

*Return No. V.—Agricultural Stock.*

128. The compilation is confined to the returns from villages and towns. The stock though to a large extent agricultural, which is to be found in cities, is not enumerated. There is probably no class of statistics less improveable by check and supervision. All that can be done must be done by means of careful forms for registration with full explanatory remarks. This has been done in the Revised Manual, according to the prescribed forms, of which the next annual census will be taken.

129. Calculations based on the reported figures and percentages taken to show the number of plough cattle per plough, the number of acres of cropped land per pair, and the like, are before me, but the inexplicable discrepancies evident deter me from making any comment.

The returns show a general decrease due

1. to the exclusion of the stock returns from villages which cannot produce statistics of crops and the like. The principle is laid down by the Government of India that a village should be excluded if it cannot give *all* the statistics required. For provincial purposes this principle might be infringed in the case of the stock return, but that it is sound. The stock returns of villages which do not keep the required forms can have little claim to accuracy;
2. to an undoubted increased mortality from the scarcity of fodder in the Deccan in the early monsoon noticed in the rainfall statistics.

*B.—Rainfall.*

130. The object of the Rainfall Tables (pages xxi—xxix) is to provide a short classified record of the rainfall in each of the districts which are most liable to periodical distress by reason of unseasonable or deficient rainfall. The record is designed not to give early information as to the fall of rain, but to place on permanent record the general characteristics of the season. Below the rainfall figures, therefore, short explanatory remarks are entered. The rain periods are given under their local names, because these indicate, more than any other possible division, the characteristics of the season. Each period (or Nakshatra) is from 13 to 14 days in duration. Another object is to utilize the sayings and proverbs among the people, regarding the prognostications which their traditions have led them to make.

A multiplicity of stations is avoided in this record. The exact position of the gauge is, however, indicated, so that local knowledge may make, when necessary, deductions as to the rainfall of the whole area covered by the record. Where the gauge station is different from the head-quarter station of the táluka or petha, the rain-gauge station is shown in brackets. Totals for each district are for obvious reasons not shown.

131. The transfer of the duties of compiling rainfall returns during the year to the Agricultural Department will enable me to give a more complete analysis in future, and to make the general remarks more accurate and full.

Throughout the present monsoon a monthly statement of rainfall has been shown in the *Government Gazette* with explanatory remarks. It will, therefore, be better for me to avoid reference to the season of 1886-87 in a report which deals with the former year. It may, however, be noticed that the present season is unusually favourable throughout the Presidency.

The publication of rain figures in the *Gazette* is not intended to give the earliest possible information as to the rain. That information is given in the weekly summaries prepared in the Secretariat. The design of the analysis shown in the *Gazette* is to lead up to the record, which is finally shown in this report, by periodical record of the conditions and prospects of the season.

To make the returns complete, a record of daily rainfall at the principal station of each táluka (or more stations than one where advisable) is made in my office from printed post-card returns received weekly during the monsoon months, and from monthly returns showing daily fall in the non-monsoon months.

*C.—Crop Experiments.*

132. These experiments, which are made by revenue officers with the object primarily of testing the incidence of the survey assessment on produce, are also designed to have a bearing on the Agricultural Statistics of the country. I will quote from the Government Resolution which reviewed my last report on Crop Experiments (Government Resolution No. 4755, dated 3rd July 1886) :—

> Besides the importance of the results in connection with the incidence of the land revenue and the condition of the peasantry, the habits of observation formed and the information about agriculture gained in making the experiments are invaluable to Gov-

ernment officers, and the evidence of accuracy, patience and intelligence or the want of them which the experiments afford, is carefully noted by Government.

The bearing of these experiments on statistics is two-fold. They give information as to outturn of various crops, and they also aid in showing the manner in which, in cases of mixed crops, the area should be apportioned among the various ingredients of the mixture.

It has been usual for me to submit the experimental results tabulated uniformly with a brief analysis. The report will again be submitted separately. The experiments in 1885-86 were confined to selected crops in selected tracts. Larger expenditure was barred by financial pressure.

## VIII.—TRADE AND TRADE STATISTICS.

133. The Rail-borne and Road Traffic statistics were, as in last year, compiled by the Examiner of Guaranteed Railway Accounts. The annual report of the Examiner has been reviewed by me and submitted to Government.

The following is the brief summary of the Annual Report for 1885-86.

### Rail-borne Trade.

134. In round numbers the figures show an increase in the total trade of 6 million maunds in quantity, but accompanied by a decrease in recorded value amounting to 3½ lákhs rupees. Imports and exports, *i. e.*, trade with external blocks make up 59 per cent. of the total. The remainder 41 per cent. represents the local trade or trade of internal blocks *inter se*. This ratio is practically the same as for the previous year.

| | 1884-85. | 1885-86. |
|---|---|---|
| Imports ... ... ... | 28 | 31 |
| Exports ... ... ... | 7½ | 10 |
| Local Trade ... .. | 27½ | 28 |
| Total Million Maunds ... | 63 | 69 |

The following statement shows the chief imports into, and exports from, the Bombay Presidency :—

| Imports into Bombay Presidency from Sind and the rest of India. | Maunds. | Exports from Bombay Presidency to Sind and the rest of India. | Maunds. |
|---|---|---|---|
| Wheat ... ... ... | 13,636,728 | Salt ... ... ... ... | 3,910,896 |
| Other Food-grains ... | 3,703,816 | Cotton Piece-goods (European) | 619,071 |
| Oil-seeds ... ... | 7,951,470 | Do. do. (Indian) ... | 225,875 |
| Cotton (raw) ... ... | 2,331,210 | Coal ... ... ... ... | 426,300 |
| Dyes and Tans ... | 432,548 | Metals ... ... ... | 885,553 |
| Wool (raw) ... ... | 96,621 | Sugar ... ... ... | 344,183 |
| Opium ... ... ... | 75,437 | Kerosine oil ... ... ... | 209,957 |
| Provisions (Ghee) ... | 106,502 | Tobacco ... ... ... | 186,297 |
| Others ... ... ... | 2,508,863 | Jute and Gunny Bags ... | 258,164 |
| | | Others ... ... ... | 2,898,742 |
| Total ... | 30,843,195 | Total ... | 9,965,038 |

No less than 90 per cent. of imports are received by the Port of Bombay alone, and therefore chiefly for export beyond the seas. Grains show an increase of 2 million maunds. Of the total grain imports (17 million maunds) wheat is credited with 13½ millions, and is received as indicated marginally. This strong evidence of the progress of the wheat trade will be still further corroborated by the figures of the local trade. Oil-seeds give a decrease of ½ million maunds, due to lessened receipts of gingelly from Central India and Rájputána. Cotton shows as large an increase. Half comes from the Berárs. The rest about equally from the North-West Provinces and Oudh and from Rájputána and Central India.

| | |
|---|---|
| Central Provinces ... ... ... | 6·9 |
| North-West Provinces and Oudh ... | 2·0 |
| Punjáb ... ... ... ... ... | 1·8 |
| Rájputána and Central India... ... | 1·6 |
| Berárs ... ... ... ... ... | 1·2 |
| Total Million Maunds ... | 13·5 |

The sources of other principal imports are :—Dyes and Tans (myrobalans) from the Central Provinces ; Opium from Rájputána and Central India; Wool from Rájputána and Central India and Punjáb ; Ghee from North-West Provinces and Oudh and Central Provinces.

Of the 10 million maunds of exports, 4 millions are credited to salt against 2½ millions in the previous year. In order of importance the other chief exports were cotton goods, coal, metals, sugar and tobacco, *i. e.* articles mostly from foreign parts shipped to Bombay for the up-country demand. Salt went chiefly to the North-West Provinces and Central Provinces. Rájputána and Central India took twice as much, but the North-West Provinces and Oudh 50 times as large a quantity as in the previous year. The export of tobacco from Gujarát and Káthiáwár to Rájputána and Central India declined.

*Local Trade by rail.*—Of the 28 million maunds included under this head, Bombay Port received 11¾ and gave 11¼ millions. The receipts were chiefly grains 2¼ including wheat 1¾, cotton and cotton goods 2½, oil-seeds and oils 3½ million maunds. Bombay despatched 5 million maunds of coal to the Mofussil.

The movements by rail from the Southern Marátha Country in cotton are worthy of special notice. Before the new line was opened, all cotton was exported by sea. In 1886 up to August the totals were by sea 24,683 bales—by rail 38,451. Of this, 27,000 bales came to Bombay after the burst of the monsoon, and thus five or six months earlier than if the sea route only were available. The gain in avoiding damage by storage in the villages during the monsoon is considerable.

### Road-borne Trade.

135. The total road-borne traffic registered amounted to 4½ million maunds compared with 3¾ millions of the previous year. Last year imports made up 79 per cent of the total. This year 83 per cent. This trade is practically the traffic with Native States by the chief trade routes. Much of it is again registered as internal rail-borne traffic between the blocks of the Presidency. Thus the principal post in Sholápur is really the registration post of the imports from the Nizám's territory. It is this which explains the high place taken by Sholápur and Ahmadnagar among internal blocks as regards the amount of export traffic by rail. The cost of trade registration is given below :—

| | 1884-85. | 1885-86. | Increase. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Rail ... ... ... | 3,852 | 4,130 | 278 |
| Road... ... ... | 10,974 | 11,498 | 524 |
| Total ... | 14,826 | 15,628 | 802 |

The whole system of road traffic registration is under consideration.

I have the honour to be,

Sir,

Your most obedient Servant,

E. C. OZANNE,

Director of Agriculture.

# STATISTICS.

## A.—AGRICULTURAL.

# STATISTICS.

## A.—AGRICULTURAL.

### I.—Area of Available Statistics, 1885-86.

| No. | District. | Number and Area of Villages exclusive of Foreign Territory, Feudatory and Tributary States. | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. | 832 | 2,319,167 | 52 | 123,518 | 884 | 2,442,685 | 448 | 1,057,016 | 384 | 1,262,151 | 52 | 123,518 | 884 | 2,442,685 | .. | .... | .. | .... | .. | .... |
| 2 | Kaira .. .. .. .. | 563 | 994,254 | 28 | 27,464 | 591 | 1,021,718 | 436 | 757,875 | 90 | 174,606 | .. | .... | 526 | 932,481 | 37 | 61,773 | 28 | 27,464 | 65 | 89,237 |
| 3 | Panch Mahále .. .. .. | 663½ | 900,364 | 86½ | 127,383 | 750 | 1,027,747 | 424 | 666,552 | 78 | 67,467 | 24 | 27,756 | 526 | 761,775 | 101½ | 166,345 | 62½ | 99,627 | 224 | 265,972 |
| 4 | Broach .. .. .. .. | 408 | 917,684 | 15 | 18,724 | 423 | 936,408 | 408 | 917,684 | .. | .... | .. | .... | 408 | 917,684 | .. | .... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat .. .. .. .. | 820½ | 1,027,219 | 32½ | 31,055 | 853 | 1,058,274 | 810½ | 1,014,984 | 6 | 10,365 | 4½ | 5,254 | 821 | 1,030,603 | 4 | 1,870 | 28 | 25,801 | 32 | 27,671 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. | 3,223 | 5,494,194 | 111½ | 207,439 | 3,334½ | 5,701,633 | 2,674⅓ | 4,615,788 | 317 | 501,780 | 98½ | 193,174 | 3,090 | 5,310,742 | 231½ | 376,626 | 13 | 14,265 | 244½ | 390,891 |
| 7 | Násik .. .. .. .. | 1,512 | 3,397,767 | 184 | 298,274 | 1,696 | 3,696,041 | 1,501 | 3,395,317 | .. | .... | 79 | 164,960 | 1,580 | 3,560,277 | 11 | 2,450 | 105 | 133,314 | 116 | 135,764 |
| 8 | Ahmadnagar .. .. .. | 1,297½ | 3,964,527 | 78½ | 280,257 | 1,376 | 4,244,784 | 1,225 | 3,694,869 | 61½ | 247,190 | 48 | 203,180 | 1,334½ | 4,145,239 | 11 | 22,468 | 30½ | 77,077 | 41½ | 99,545 |
| 9 | Poona .. .. .. .. | 997¾ | 2,853,492 | 203¼ | 508,069 | 1,201 | 3,361,561 | 995¾ | 2,852,884 | .. | .... | 160¼ | 467,760 | 1,156 | 3,320,644 | 2 | 608 | 43 | 40,309 | 45 | 40,917 |
| 10 | Sholápur .. .. .. .. | 663 | 2,683,324 | 54 | 223,042 | 717 | 2,906,366 | 663 | 2,683,324 | .. | .... | 34 | 138,791 | 697 | 2,822,115 | .. | .... | 20 | 84,251 | 20 | 84,251 |
| 11 | Sátára .. .. .. .. | 960 | 2,456,240 | 394 | 620,982 | 1,354 | 3,077,222 | 960 | 2,456,240 | .. | .... | 265 | 487,006 | 1,225 | 2,943,246 | .. | .... | 129 | 133,976 | 129 | 133,976 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. | 893 | 2,276,142 | 240 | 544,983 | 1,133 | 2,821,125 | 893 | 2,276,142 | .. | .... | 182 | 536,650 | 1,075 | 2,812,792 | .. | .... | 58 | 8,333 | 58 | 8,333 |
| 13 | Bijápur .. .. .. .. | 1,011 | 3,205,704 | 162 | 420,504 | 1,173 | 3,626,208 | 1,010 | 3,205,517 | .. | .... | 153 | 379,346 | 1,163 | 3,584,863 | 1 | 187 | 9 | 41,158 | 10 | 41,345 |
| 14 | Dhárwár .. .. .. .. | 1,280 | 2,689,217 | 183 | 267,512 | 1,463 | 2,956,729 | 1,280 | 2,689,217 | .. | .... | 137 | 180,878 | 1,417 | 2,870,095 | .. | .... | 46 | 86,634 | 46 | 86,634 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | 1,382 | 2,392,445 | 102 | 75,315 | 1,984 | 2,467,760 | 1,864 | 2,382,184 | 3 | 2,661 | 25 | 31,011 | 1,892 | 2,415,856 | 15 | 7,600 | 77 | 44,304 | 92 | 51,904 |
| 16 | Kolába .. .. .. .. | 1,262 | 1,092,357 | 80 | 30,461 | 1,342 | 1,122,818 | 762 | 570,718 | 500 | 521,639 | 6 | 3,466 | 1,268 | 1,095,823 | .. | .... | 74 | 26,995 | 74 | 26,995 |
| 17 | Ratnágiri .. .. .. .. | 1,272½ | 2,384,675 | 63 | 106,916 | 1,335½ | 2,491,591 | ... | .... | .. | .... | .. | .... | .. | .... | 1,272½ | 2,384,675 | 63 | 106,916 | 1,335½ | 2,491,591 |
| 18 | Kánara .. .. .. .. | 1,313 | 2,502,400 | .. | .... | 1,313 | 2,502,400 | 1,122 | 2,161,205 | .. | .... | .. | .... | 1,122 | 2,161,205 | 191 | 341,195 | .. | .... | 191 | 341,195 |
| | Total A. ... | 20,853¾ | 43,551,172 | 2,069¼ | 3,911,898 | 22,923 | 47,463,070 | 17,476¾ | 37,397,516 | 1,439½ | 2,787,859 | 1,268¼ | 2,942,750 | 20,184⅓ | 43,128,125 | 1,937½ | 3,365,797 | 801 | 9,69,148 | 2,738½ | 4,334,945 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. .. | 706 | 4,127,037 | 15 | 34,107 | 721 | 4,161,144 | 347 | 1,715,809 | .. | .... | 5 | 4,965 | 352 | 1,720,774 | 359 | 2,411,228 | 10 | 29,142 | 369 | 2,440,370 |
| 20 | Haidarabad .. .. .. | 1,135 | 5,330,244 | 56 | 250,399 | 1,191 | 5,580,643 | 860 | 3,504,986 | .. | .... | .. | .... | 860 | 3,504,986 | 275 | 1,825,258 | 56 | 250,399 | 331 | 2,075,657 |
| 21 | Shikárpur .. .. .. .. | 1,159 | 4,057,653 | 23 | 362,343 | 1,182 | 4,419,996 | 1,124 | 3,110,692 | .. | .... | 12 | 30,724 | 1,136 | 3,141,416 | 35 | 946,961 | 11 | 331,619 | 46 | 1,278,580 |
| 22 | Upper Sind Frontier .. .. | .. | 1,563,022 | .. | 35,204 | .. | 1,598,226 | 228 | 660,620 | .. | .... | 6 | 27,333 | 234 | 687,953 | .. | 902,402 | .. | 7,871 | .. | 910,273 |
| 23 | Thar and Párkar .. .. .. | .. | 8,146,560 | .. | .... | .. | 8,146,560 | .. | .... | .. | .... | .. | .... | .. | .... | .. | 8,146,560 | .. | .... | .. | 8,146,560 |
| | Total B. ... | 3,000 | 23,224,516 | 94 | 682,053 | 3,094 | 23,906,569 | 559 | 8,992,107 | ... | ... | 23 | 63,022 | 2,5 2 | 9,055,129 | 669 | 14,232,409 | 77 | 6,19,031 | 746 | 14,851,440 |
| | Grand Total ... | 23,853¾ | 66,775,688 | 2,163¼ | 4,593,951 | 26,017 | 71,369,639 | 20,035¾ | 46,389,623 | 1,439½ | 2,787,859 | 1,291¼ | 3,005,772 | 22,766⅓ | 52,183,254 | 2,606½ | 17,598,206 | 878 | 1,588,179 | 3,484½ | 19,186,385 |

# II.—Area, Cultivated and Uncultivated, 1885-86.

| No. | District. | | Total Area as in columns 5, 6 and 7 of Return No. I. | Cultivated Area. Gross Area cropped. | Deduct Area cropped more than once. | Remainder Net Area cropped. | Detail of column 5. Assessed Land. | Unassessed Land. | Add Current Fallows. | Total columns 5 and 8. | Uncultivated Area. Available for cultivation. Assessed Land. | Unassessed Land. | Not available for cultivation. Forest. | Other. | Total columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. .. .. | 1,057,016 | 696,797 | 18,522 | 678,275 | 676,582 | 1,693 | 97,777 | 776,052 | 84,901 | 11,946 | ... | 184,117 | 280,964 |
| | | Other Government.. .. .. | 1,262,151 | 588,969 | 4,835 | 584,134 | 584,134 | .... | 403,429 | 987,563 | ... | 6,512 | ... | 268,076 | 274,588 |
| | | Alienated .. .. .. .. | 123,518 | 57,627 | 3,668 | 53,959 | 53,959 | .... | 69,357 | 123,316 | ... | ..... | ... | 202 | 202 |
| | | Total ... | 2,442,685 | 1,343,393 | 27,025 | 1,316,368 | 1,314,675 | 1,693 | 570,563 | 1,886,931 | 84,901 | 18,458 | ... | 452,395 | 555,754 |
| 2 | Kaira ... ... | Rayatwári .. .. .. .. | 757,875 | 561,812 | 19,671 | 542,141 | 541,709 | 432 | 35,989 | 578,130 | 78,990 | 914 | ... | 99,842 | 179,746 |
| | | Other Government .. .. | 174,606 | 158,319 | 5,287 | 153,032 | 152,999 | 33 | 5,443 | 158,475 | 366 | ... | ... | 15,764 | 16,130 |
| | | Alienated .. .. .. .. | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ..... |
| | | Total ... | 932,481 | 720,131 | 24,958 | 695,173 | 694,708 | 465 | 41,432 | 736,605 | 79,356 | 914 | ... | 115,606 | 195,876 |
| 3 | Panch Mahále ... | Rayatwári .. .. .. .. | 666,552 | 256,960 | 32,194 | 224,766 | 224,766 | ... | 34,965 | 259,731 | 112,350 | 198,685 | 45,098 | 50,688 | 406,821 |
| | | Other Government.. .. .. | 67,467 | 12,855 | 84 | 12,771 | 12,771 | ... | 42,836 | 55,607 | ... | ..... | ... | 11,860 | 11,860 |
| | | Alienated .. .. .. .. | 27,756 | 13,849 | 137 | 13,712 | 13,712 | ... | 11,341 | 25,053 | ... | ... | 776 | 1,927 | 2,703 |
| | | Total ... | 761,775 | 283,664 | 32,415 | 251,249 | 251,249 | ... | 89,142 | 340,391 | 112,350 | 198,685 | 45,874 | 64,475 | 421,384 |
| 4 | Broach ... ... | Rayatwári .. .. .. .. | 917,684 | 555,620 | 1,307 | 554,313 | 554,313 | ... | 81,888 | 636,201 | 29,305 | 7,940 | 8 | 244,230 | 281,483 |
| | | Other Government.. .. .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ... | ... |
| | | Alienated .. .. .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .... |
| | | Total ... | 917,684 | 555,620 | 1,307 | 554,313 | 554,313 | ... | 81,888 | 636,201 | 29,305 | 7,940 | 8 | 244,230 | 281,483 |
| 5 | Surat ... ... | Rayatwári .. .. .. . | 1,014,984 | 524,710 | 49,126 | 475,584 | 475,433 | 151 | 242,199 | 717,783 | 41,433 | 31,288 | 45,631 | 178,849 | 297,201 |
| | | Other Government.. .. .. | 10,365 | 5,062 | 342 | 4,720 | 4,720 | ... | 3,960 | 8,680 | ... | 759 | ... | 926 | 1,685 |
| | | Alienated .. .. .. .. | 5,254 | 3,740 | 11 | 3,729 | 3.729 | ... | 1,376 | 5,105 | ... | ..... | ... | 149 | 149 |
| | | Total ... | 1,030,603 | 533,512 | 49,479 | 484,033 | 483,882 | 151 | 247,535 | 731,568 | 41,433 | 32,047 | 45,631 | 179,924 | 299,035 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. | Rayatwári .. .. .. .. | 4,615,788 | 2,732,485 | 11,361 | 2,721,124 | 2,719,969 | 1,155 | 260,304 | 2,981,428 | 490,794 | 278,121 | 266,704 | 598,741 | 1,634,360 |
| | | Other Government.. .. .. | 501,780 | 62,843 | ... | 62,843 | 9,318 | 53,525 | 2,273 | 65,116 | 4,237 | 149,945 | 271,192 | 11,290 | 436,664 |
| | | Alienated .. .. .. .. | 193,174 | 109,879 | 158 | 109,721 | 91,230 | 18,491 | 13,174 | 122,895 | 12,573 | 29,927 | 56 | 27,723 | 70,279 |
| | | Total ... | 5,310,742 | 2,905,207 | 11,519 | 2,893,688 | 2,820,517 | 73,171 | 275,751 | 3,169,439 | 507,604 | 457,993 | 537,952 | 637,754 | 2,141,303 |
| 7 | Násik ... ... | Rayatwári .. .. .. .. | 3,395,317 | 1,830,705 | 23,684 | 1,807,021 | 1,807,021 | ... | 367,831 | 2,174,852 | 192,161 | 115,878 | 582,380 | 330,046 | 1,220,465 |
| | | Other Government.. .. .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ... | ..... |
| | | Alienated .. .. .. .. | 164,960 | 99,838 | 1,096 | 98,742 | 98,742 | ... | 19,372 | 118,114 | 18,317 | 5,881 | 141 | 22,507 | 46,846 |
| | | Total ... | 3,560,277 | 1,930,543 | 24,780 | 1,905,763 | 1,905,763 | ... | 387,203 | 2,292,966 | 210,478 | 121,759 | 582,521 | 352,553 | 1,267,311 |
| 8 | Ahmadnagar ... | Rayatwári .. .. .. .. | 3,694,869 | 2,302,591 | 20,879 | 2,281,712 | 2,281,241 | 471 | 365,583 | 2,647,295 | 174,289 | 6,783 | 509,542 | 356,960 | 1,047,574 |
| | | Other Government.. .. .. | 247,190 | 166,354 | 926 | 165,428 | 165,424 | 4 | 30,107 | 195,535 | 8,699 | 1,634 | 38 | 41,284 | 51,655 |
| | | Alienated .. .. .. .. | 203,180 | 146,942 | 526 | 146,416 | 146,410 | 6 | 20,190 | 166,606 | 10,149 | 502 | 93 | 25,830 | 36,574 |
| | | Total ... | 4,145,239 | 2,615,887 | 22,331 | 2,593,556 | 2,593,075 | 481 | 415,880 | 3,009,436 | 193,137 | 8,919 | 509,673 | 424,074 | 1,135,803 |
| 9 | Poona ... ... | Rayatwári .. .. .. .. | 2,852,884 | 1,782,042 | 46,046 | 1,735,996 | 1,735,996 | ... | 292,651 | 2,028,647 | 53,461 | 2,166 | 356,539 | 412,071 | 824,237 |
| | | Other Government.. .. .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... |
| | | Alienated .. .. .. .. | 467,760 | 312,138 | 8,399 | 303,739 | 303,739 | ... | 66,824 | 370,563 | 3,634 | ... | 2,686 | 90,877 | 97,197 |
| | | Total ... | 3,320,644 | 2,094,180 | 54,445 | 2,039,735 | 2,039,735 | ... | 359,475 | 2,399,210 | 57,095 | 2,166 | 359,225 | 502,948 | 921,434 |
| 10 | Sholápur ... | Rayatwári .. .. .. .. | 2,683,324 | 1,977,236 | 25,410 | 1,951,826 | 1,951,600 | 226 | 300,724 | 2,252,550 | 125,067 | 6,314 | 76,544 | 222,849 | 430,774 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... |
| | | Alienated .. .. .. .. | 138,791 | 97,024 | 2,009 | 95,015 | 94,995 | 20 | 17,428 | 112,443 | 629 | 2,412 | ... | 23,307 | 26,348 |
| | | Total ... | 2,822,115 | 2,074,260 | 27,419 | 2,046,841 | 2,046,595 | 246 | 318,152 | 2,364,993 | 125,696 | 8,726 | 76,544 | 246,156 | 457,122 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Sátára ... | Rayatwári | 2,456,240 | 1,539,664 | 74,128 | 1,465,536 | 1,465,310 | 226 | 303,424 | 1,768,960 | 36,090 | 2,239 | 412,087 | 236,864 | 687,280 |
| | | Other Government | .... | .... | .... | .... | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated | 487,006 | 322,478 | 19,698 | 302,780 | 302,780 | .. | 96,937 | 399,717 | 194 | 15,339 | 13,067 | 58,689 | 87,289 |
| | | Total ... | 2,943,246 | 1,862,142 | 93,826 | 1,768,316 | 1,768,090 | 226 | 400,361 | 2,168,677 | 36,284 | 17,578 | 425,154 | 295,553 | 774,569 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári | 2,276,142 | 1,472,131 | 91,144 | 1,380,987 | 1,380,981 | 6 | 244,971 | 1,625,958 | 92,639 | 30,900 | 382,046 | 1,44,599 | 650,184 |
| | | Other Government | .... | .... | .... | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated | 536,650 | 328,372 | 16,705 | 311,667 | 311,667 | .. | 88,540 | 400,207 | 46,631 | .. | 53,104 | 36,708 | 136,443 |
| | | Total ... | 2,812,792 | 1,800,503 | 107,849 | 1,692,654 | 1,692,648 | 6 | 333,511 | 2,026,165 | 139,270 | 30,900 | 435,150 | 181,307 | 786,627 |
| 13 | Bijápur ... | Rayatwári | 3,205,517 | 2,338,951 | 1,707 | 2,337,244 | 2,337,168 | 76 | 240,098 | 2,577,342 | 278,562 | 23,289 | 1,54,684 | 171,640 | 628,175 |
| | | Other Government | .... | .... | .... | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated | 379,346 | 259,736 | 276 | 259,460 | 259,459 | 1 | 85,193 | 344,653 | 7,988 | 808 | .. | 25,897 | 34,693 |
| | | Total ... | 3,584,863 | 2,598,687 | 1,983 | 2,596,704 | 2,596,627 | 77 | 325,291 | 2,921,995 | 286,550 | 24,097 | 154,684 | 197,537 | 662,868 |
| 14 | Dhárwár ... | Rayatwári | 2,689,217 | 1,946,663 | 21,425 | 1,925,238 | 1,925,167 | 71 | 222,906 | 2,148,144 | 80,357 | 12 | 276,316 | 184,388 | 541,073 |
| | | Other Government | .... | .... | .... | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated | 180,878 | 107,574 | 1,265 | 106,309 | 104,981 | 1,328 | 35,860 | 142,169 | 15,623 | 2 | 3,092 | 19,992 | 38,709 |
| | | Total ... | 2,870,095 | 2,054,237 | 22,690 | 2,031,547 | 2,030,148 | 1,399 | 258,766 | 2,290,313 | 95,980 | 14 | 279,408 | 204,380 | 579,782 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári | 2,382,184 | 514,518 | 5,786 | 508,732 | 508,732 | .. | 476,286 | 985,018 | 55,119 | 1,31,550 | 640,024 | 570,473 | 1,397,166 |
| | | Other Government | 2,661 | 742 | 2 | 740 | 740 | .. | 649 | 1,389 | .. | 837 | 219 | 216 | 1,272 |
| | | Alienated | 31,011 | 7,550 | 47 | 7,503 | 7,503 | .. | 8,538 | 16,041 | 2 | 2,724 | 5,168 | 7,136 | 14,970 |
| | | Total ... | 2,415,856 | 522,810 | 5,835 | 516,975 | 516,975 | ... | 485,473 | 1,002,448 | 55,121 | 135,111 | 645,351 | 577,825 | 1,413,408 |
| 16 | Kolába ... | Rayatwári | 570,718 | 180,219 | 4,559 | 175,660 | 175,660 | .. | 110,371 | 286,031 | 8,236 | 72,160 | 41,243 | 163,048 | 284,687 |
| | | Other Government | 521,659 | 187,224 | 4,555 | 182,669 | 182,669 | .. | 113,677 | 296,346 | 2,192 | 6,047 | 71,330 | 145,724 | 225,293 |
| | | Alienated | 3,466 | 1,174 | 5 | 1,169 | 1,169 | .. | 1,208 | 2,377 | .. | 608 | .. | 481 | 1,089 |
| | | Total ... | 1,095,823 | 368,617 | 9,119 | 359,498 | 359,498 | ... | 225,256 | 584,754 | 10,428 | 78,815 | 112,573 | 309,253 | 511,069 |
| 17 | Ratnágiri ... | Rayatwári | Not available. | | | | | | | | | | | | |
| | | Other Government | | | | | | | | | | | | | |
| | | Alienated | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | |
| 18 | Kánara ... | Rayatwári | 2,161,205 | 218,799 | 10,464 | 208,335 | 208,335 | .. | 76,581 | 284,916 | 48,899 | 778 | 1,433,041 | 393,571 | 1,876,289 |
| | | Other Government | .... | .... | .... | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated | .... | .... | .... | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Total ... | 2,161,205 | 218,799 | 10,464 | 208,335 | 208,335 | ... | 76,581 | 284,916 | 48,899 | 778 | 1,433,041 | 393,571 | 1,876,289 |
| | Total A. | Rayatwári | 3,73,97,516 | 21,431,903 | 457,413 | 20,974,490 | 20,969,983 | 4,507 | 3,754,548 | 24,729,038 | 1,982,653 | 920,963 | 5,221,887 | 4,542,976 | 12,668,479 |
| | | Other Government | 2,787,859 | 1,182,368 | 16,031 | 1,166,337 | 1,112,775 | 53,562 | 602,374 | 1,768,711 | 15,494 | 165,734 | 342,779 | 495,140 | 1,019,147 |
| | | Alienated | 2,942,750 | 1,867,921 | 54,000 | 1,813,921 | 1,794,075 | 19,846 | 535,338 | 2,319,259 | 115,740 | 58,203 | 78,123 | 341,425 | 593,491 |
| | | Total ... | 43,128,125 | 24,482,192 | 527,444 | 23,954,748 | 23,876,833 | 77,915 | 4,892,260 | 28,847,008 | 2,113,887 | 1,144,900 | 5,642,789 | 5,379,541 | 14,281,117 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi... | | 1,720,774 | 227,449 | 11,332 | 216,117 | ..... | ... | 244,660 | 460,777 | 280,082 | | 70,636 | 909,279 | 1,259,997 |
| 20 | Haidarabad | | 3,504,986 | 495,465 | 3,482 | 491,983 | ..... | ... | 863,262 | 1,355,245 | 1,536,921 | | 12,327 | 600,493 | 2,149,741 |
| 21 | Shikárpur | | 3,141,416 | 750,487 | 125,952 | 624,535 | ..... | ... | 541,372 | 1,165,907 | 1,085,075 | | 274,393 | 616,041 | 1,975,509 |
| 22 | Upper Sind Frontier ... | | 687,953 | 145,312 | 8,163 | 137,149 | ..... | ... | 224,266 | 361,415 | 228,169 | | 32,878 | 65,491 | 326,538 |
| 23 | Thar and Párkar | | Not available. | | | | | | | | | | | | |
| | | Total B. ... | 9,055,129 | 1,618,713 | 148,929 | 1,469,784 | ..... | ... | 1,873,560 | 3,343,344 | 3,130,247 | | 390,234 | 2,191,304 | 5,711,785 |
| | | Grand Total ... | 52,183,254 | 26,100,905 | 676,373 | 25,424,532 | ..... | ... | 6,765,820 | 32,190,352 | 6,389,034 | | 6,033,023 | 7,570,845 | 19,992,902 |

# III.—Crops, 1885-86.

| No. | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet), Sorghum vulgare, &c. | Bájri (Spiked Millet), Penicillaria spicata. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu). Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Maka), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Eleusine corocana. | Kále, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum miliaceum, P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum piloseum. | Amaranth (Rájgira), Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 148,710 | 115,812 | 67,049 | 101,262 | 13,619 | 3,023 | 13,051 | 1,773 | 140 | 186 | 2,701 | ..... | 37 | ..... | 467,913 |
| | | Other Government ... ... | 120,340 | 82,615 | 14,276 | 132,581 | 3,127 | 399 | 3,830 | 350 | 12 | 22 | 5,480 | ..... | ..... | ..... | 363,032 |
| | | Alienated ... ... ... | 13,682 | 9,138 | 4,464 | 9,901 | 1,072 | 129 | 340 | 32 | 4 | 27 | 1,418 | ..... | ..... | ..... | 40,207 |
| | | Total ... | 282,732 | 207,565 | 86,389 | 243,744 | 17,818 | 3,551 | 17,221 | 2,155 | 156 | 185 | 9,599 | ..... | 37 | ..... | 871,152 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 59,789 | 157,289 | 101,667 | 17,450 | 8,112 | 409 | 76,792 | 52,996 | 211 | 622 | 816 | ..... | 159 | ..... | 476,312 |
| | | Other Government ... ... | 17,540 | 46,161 | 13,790 | 884 | 193 | 7 | 28,255 | 12,689 | 23 | 347 | 39 | ..... | 29 | ..... | 119,957 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 77,329 | 203,450 | 115,457 | 18,334 | 8,305 | 416 | 105,047 | 65,685 | 234 | 969 | 855 | ..... | 188 | ..... | 596,269 |
| 3 | Panch Maháls ... | Rayatwári ... ... ... | 1,689 | 34,197 | 41,660 | 3,241 | 335 | 66,206 | 13,472 | 10,544 | 1 | 41 | 8,964 | 284 | 4 | 3,326 | 183,964 |
| | | Other Government ... ... | 546 | 2,318 | 4,058 | 213 | 4 | 156 | 2,174 | 453 | ..... | ..... | 482 | ..... | ..... | 82 | 10,486 |
| | | Alienated ... ... ... | 195 | 4,534 | 3,631 | 112 | ..... | 6 | 1,534 | 717 | ..... | ..... | 932 | ..... | ..... | 1 | 11,662 |
| | | Total ... | 2,430 | 41,049 | 49,349 | 3,566 | 339 | 66,368 | 17,180 | 11,714 | 1 | 41 | 10,378 | 284 | 4 | 3,409 | 206,112 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 108,378 | 12,471 | 26,326 | 87,425 | ..... | 12 | 7,595 | 111 | 5 | 89 | ..... | ..... | ..... | 77 | 242,489 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 108,378 | 12,471 | 26,326 | 87,425 | ..... | 12 | 7,595 | 111 | 5 | 89 | ..... | ..... | ..... | 77 | 242,489 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 105,743 | 6,303 | 103,691 | 32,284 | 7 | ..... | 39,959 | 12,771 | 2 | ..... | 1,010 | 109 | 1 | 554 | 302,434 |
| | | Other Government ... ... | 1,408 | 10 | 671 | 67 | ..... | ..... | 612 | 129 | ..... | ..... | ..... | ..... | ..... | ..... | 2,897 |
| | | Alienated ... ... ... | 2,740 | 5 | 231 | 85 | ..... | ..... | 183 | 40 | ..... | ..... | ..... | ..... | ..... | ..... | 3,284 |
| | | Total ... | 109,891 | 6,318 | 104,593 | 32,436 | 7 | ..... | 40,754 | 12,940 | 2 | ..... | 1,010 | 109 | 1 | 554 | 308,615 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | Rayatwári ... ... ... | 514,220 | 617,370 | 14,768 | 323,044 | 8 | 1,940 | 1,895 | 8,571 | 184 | 4,170 | 802 | 536 | 280 | ..... | 1,487,788 |
| | | Other Government ... ... | 6,516 | 11,416 | 8,778 | 10,629 | ..... | 1,718 | 1,496 | 1,619 | ..... | 1,524 | 2,853 | 423 | 7 | ..... | 46,979 |
| | | Alienated ... ... ... | 25,871 | 19,110 | 942 | 13,998 | ..... | 132 | 137 | 146 | 14 | 249 | 69 | 43 | 49 | ..... | 60,760 |
| | | Total ... | 546,607 | 647,896 | 24,488 | 347,671 | 8 | 3,790 | 3,528 | 10,336 | 198 | 5,943 | 3,724 | 1,002 | 336 | ..... | 1,595,527 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 100,327 | 681,294 | 41,517 | 297,126 | ..... | 2,895 | 46 | 146,983 | 745 | 56,520 | 6 | 2,106 | 332 | ..... | 1,329,897 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 3,877 | 31,572 | 1,608 | 28,816 | ..... | 48 | ..... | 5,260 | 5 | 2,356 | ..... | 187 | ..... | ..... | 73,729 |
| | | Total ... | 104,204 | 712,866 | 43,125 | 325,942 | ..... | 2,943 | 46 | 152,243 | 750 | 58,876 | 6 | 2,293 | 332 | ..... | 1,403,626 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 841,484 | 773,064 | 7,675 | 265,356 | 240 | 966 | 80 | 23,225 | 1,537 | 12,758 | ..... | 3,144 | 581 | 355 | 1,930,461 |
| | | Other Government ... ... | 81,371 | 42,353 | 139 | 12,188 | 27 | 45 | 1 | ..... | 58 | 37 | ..... | 77 | 16 | ..... | 136,262 |
| | | Alienated ... ... ... | 60,212 | 51,749 | 53 | 14,732 | 5 | 47 | 1 | ..... | 35 | 14 | ..... | 4 | 29 | ..... | 126,881 |
| | | Total ... | 983,067 | 867,166 | 7,867 | 292,226 | 272 | 1,058 | 82 | 23,225 | 1,630 | 12,809 | ..... | 3,225 | 626 | 355 | 2,193,608 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 710,309 | 535,122 | 48,386 | 95,459 | 1,133 | 1,938 | ..... | 57,459 | 1,237 | 37,436 | 2 | 3,111 | 236 | 1,090 | 1,492,918 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 116,656 | 111,789 | 6,970 | 17,615 | 203 | 168 | 2 | 5,054 | 122 | 2,501 | 44 | 637 | 186 | 1 | 261,948 |
| | | Total ... | 826,965 | 646,911 | 55,356 | 113,074 | 1,336 | 2,106 | 2 | 62,513 | 1,359 | 39,937 | 46 | 3,748 | 422 | 1,091 | 1,754,866 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... ... | 1,327,947 | 158,245 | 14,326 | 55,134 | 1,222 | 14,158 | 3 | 10 | 1,036 | 1,223 | ..... | ..... | ..... | 5,398 | 1,578,302 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. .. .. | 63,081 | 11,436 | 514 | 3,644 | 139 | 714 | ..... | ..... | 96 | 108 | ..... | ..... | ..... | 891 | 80,623 |
| | | Total ... | 1,390,628 | 169,681 | 14,840 | 58,778 | 1,361 | 14,872 | 3 | 10 | 1,132 | 1,331 | ..... | ..... | ..... | 6,289 | 1,658,925 |
| 11 | Sátára ... ... | Rayatwári ... ... ... | 441,556 | 491,418 | 28,166 | 60,447 | 3,856 | 7,530 | 446 | 53,405 | 18,391 | 41,143 | ..... | ..... | 419 | 457 | 1,147,234 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 87,117 | 83,666 | 11,224 | 12,002 | 846 | 1,847 | 36 | 18,415 | 6,746 | 15,977 | ..... | ..... | 172 | ..... | 2,38,048 |
| | | Total ... | 528,673 | 575,084 | 39,390 | 72,449 | 4,702 | 9,377 | 482 | 71,820 | 25,137 | 57,120 | ..... | ..... | 591 | 457 | 1,385,282 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 638,682 | 107,108 | 101,793 | 84,060 | 2,586 | 4,592 | 18 | 42,861 | 62,229 | 26,565 | ..... | ..... | ..... | 46 | 1,070,540 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 150,693 | 36,599 | 7,096 | 14,777 | 762 | 1,229 | ..... | 6,527 | 11,745 | 4,645 | ..... | ..... | ..... | 1 | 234,074 |
| | | Total ... | 789,375 | 143,707 | 108,889 | 98,837 | 3,348 | 5,821 | 18 | 49,388 | 73,974 | 31,210 | ..... | ..... | ..... | 47 | 1,304,614 |
| 13 | Bijápur ... ... | Rayatwári ... ... ... | 1,397,517 | 238,007 | 6,162 | 138,869 | 3,272 | 739 | 38 | 60 | 18,362 | 7,664 | ..... | ..... | 1 | 17 | 1,810,708 |
| | | Other Government .. .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 160,159 | 22,559 | 310 | 12,326 | 434 | 157 | ..... | 2 | 3,378 | 687 | ..... | ..... | ..... | 16 | 200,028 |
| | | Total ... | 1,557,676 | 260,566 | 6,472 | 151,195 | 3,706 | 896 | 38 | 62 | 21,740 | 8,351 | ..... | ..... | 1 | 33 | 2,010,736 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 639,245 | 5,843 | 132,211 | 213,462 | 46 | 64 | 48 | 42,812 | 68,450 | 26,776 | ..... | ..... | 25 | 2 | 1,128,984 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 39,097 | 255 | 17,394 | 7,751 | ..... | 2 | ..... | 4,884 | 4,342 | 1,606 | ..... | ..... | ..... | ..... | 75,331 |
| | | Total ... | 678,342 | 6,098 | 149,605 | 221,213 | 46 | 66 | 48 | 47,696 | 72,792 | 28,382 | ..... | ..... | 25 | 2 | 1,204,315 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári ... ... ... | 67 | ..... | 317,665 | 133 | ..... | 54 | 15,748 | 68,771 | ..... | 31,645 | ..... | ..... | 1 | ..... | 434,084 |
| | | Other Government .. .. | ..... | ..... | 670 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 670 |
| | | Alienated ... ... ... | ..... | ..... | 6,345 | ..... | ..... | ..... | ..... | 503 | ..... | 193 | ..... | ..... | ..... | ..... | 7,041 |
| | | Total ... | 67 | ..... | 324,680 | 133 | ..... | 54 | 15,748 | 69,274 | ..... | 31,838 | ..... | ..... | 1 | ..... | 441,795 |
| 16 | Kolába ... ... | Rayatwári ... ... ... | ..... | ..... | 1,38,236 | 6 | ..... | ..... | 2,373 | 14,993 | ..... | 11,142 | ..... | ..... | ..... | ..... | 167,280 |
| | | Other Government ... ... | ..... | ..... | 57,949 | ..... | ..... | ..... | 25,437 | 46,066 | ..... | 37,348 | ..... | ..... | ..... | ..... | 166,800 |
| | | Alienated ... ... ... | ..... | ..... | 869 | ..... | ..... | ..... | ..... | 180 | ..... | 45 | ..... | ..... | ..... | ..... | 1,094 |
| | | Total ... | ..... | ..... | 197,084 | 6 | ..... | ..... | 28,310 | 61,239 | ..... | 48,535 | ..... | ..... | ..... | ..... | 335,174 |
| 17 | Ratnágiri ... | Rayatwári ... ... ... | Not available. | | | | | | | | | | | | | | |
| | | Other Government ... ... | | | | | | | | | | | | | | | |
| | | Alienated ... ... ... | | | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | | | |
| 18 | Kánara ... ... | Rayatwári ... ... ... | 1,464 | ..... | 174,212 | ..... | ..... | 11 | ..... | 6,128 | 251 | 407 | ..... | ..... | ..... | ..... | 182,473 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 1,464 | ..... | 174,212 | ..... | ..... | 11 | ..... | 6,128 | 251 | 407 | ..... | ..... | ..... | ..... | 182,473 |
| | Total A. ... | Rayatwári ... ... ... | 70,36,727 | 39,33,543 | 13,66,140 | 17,74,758 | 34,436 | 1,04,537 | 1,72,064 | 5,43,473 | 1,72,781 | 2,58,337 | 14,371 | 9,290 | 2,076 | 11,322 | 1,54,33,785 |
| | | Other Government ... ... | 2,27,721 | 1,84,873 | 1,00,331 | 1,56,512 | 3,351 | 2,325 | 61,805 | 61,306 | 93 | 39,278 | 8,854 | 500 | 52 | 82 | 8,47,083 |
| | | Alienated ... ... ... | 7,23,380 | 3,82,412 | 61,651 | 1,35,759 | 3,461 | 4,479 | 2,233 | 41,760 | 26,487 | 28,408 | 2,463 | 871 | 436 | 910 | 14,14,710 |
| | | Total ... | 79,87,828 | 45,00,828 | 15,28,122 | 20,67,029 | 41,248 | 1,11,341 | 2,36,102 | 6,46,539 | 1,99,361 | 3,26,023 | 25,618 | 10,661 | 2,564 | 12,314 | 1,76,95,578 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 34,025 | 9,888 | 94,666 | 36,864 | ..... | ..... | ..... | 454 | ..... | ..... | ..... | ..... | ..... | 4,415 | 180,312 |
| 20 | Haidarabad... ... ... ... ... | | 87,257 | 189,869 | 38,715 | 28,264 | ..... | ..... | ..... | 13 | ..... | ..... | ..... | ..... | ..... | 1,348 | 345,466 |
| 21 | Shikárpur ... ... ... ... ... | | 130,745 | 7,083 | 279,840 | 148,304 | ..... | ..... | ..... | 199 | ..... | ..... | ..... | ..... | ..... | 3,860 | 570,031 |
| 22 | Upper Sind Frontier ... ... ... | | 60,858 | 2,255 | 9,184 | 9,782 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 464 | 83,544 |
| 23 | Thar and Párkar ... ... ... ... | | Not available. | | | | | | | | | | | | | | |
| | | Total B ... | 3,12,885 | 2,10,095 | 4,22,405 | 2,23,214 | ..... | ..... | ..... | 667 | ..... | ..... | ..... | ..... | ..... | 10,087 | 11,79,353 |
| | | Grand Total ... | 83,00,713 | 47,10,923 | 19,50,527 | 22,90,243 | 41,248 | 1,11,341 | 2,36,102 | 6,47,206 | 1,99,361 | 3,26,023 | 25,618 | 10,661 | 2,564 | 22,401 | 1,88,74,931 |

## III.—Crops, 1885-86—*continued.*

| No. | District. | | II.—Pulses. | | | | | | | | | | | | | | III.—Orchard and Garden Produce. | | | | | IV.—Drugs and Narcotics. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Turi (Pigeon Pea), Cajanus Indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram), Phaseolus radiatus. | Math (Kidney bean), Phaseolus aconitifolius. | Val (Large-fruited Dolichos), Dolichos lablab. | Chavli (Small-fruited Dolichos), Dolichos catiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chicking Vetch (Lákh Láng), Lathyrus sativus. | Field Vetch (Guvár), Cyamopsis psoralioides. | Others. | Total II. | A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | Tobacco (Tambákhu), Nicotiana tabacum. | Bháng Gánja (Indian Hemp), Cannabis sativa. | Opium (Afu), Papaver somniferum. | Coffee (Káfi, Bund), Coffea Arabica. | Tea (Chaha), Thea sinensis. | Cinchona officinalis. | Others. | Total IV. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. | 912 | 8,655 | 6,610 | 2,115 | 26,037 | 243 | 619 | 202 | .. | .. | .. | 3,511 | .. | 48,904 | .. | .. | .. | .. | 4,154 | 1,010 | .. | .. | .. | .. | .. | .. | 1,010 |
| | | Other Government.. | 566 | 10,544 | 12,401 | 1,052 | 15,653 | 92 | 322 | 9,520 | .. | .. | .. | 1,648 | .. | 51,798 | .. | .. | .. | .. | 374 | 357 | .. | .. | .. | .. | .. | .. | 357 |
| | | Alienated .. .. | 52 | 663 | 1,446 | 289 | 1,501 | .. | 4 | 230 | .. | .. | .. | 164 | .. | 4,349 | .. | .. | .. | .. | 312 | 61 | .. | .. | .. | .. | .. | .. | 61 |
| | | Total ... | 1,530 | 19,862 | 20,457 | 3,456 | 43,191 | 335 | 945 | 9,952 | ... | ... | ... | 5,323 | ... | 105,051 | ... | ... | ... | ... | 4,840 | 1,428 | ... | ... | ... | ... | ... | ... | 1,428 |
| 2 | Kaira ... ... | Rayatwári .. .. | 14,889 | 3,146 | 3,281 | 691 | 22,261 | 916 | 1,784 | .. | .. | .. | .. | 5,190 | .. | 52,158 | .. | .. | .. | .. | 1,624 | 8,564 | .. | .. | .. | .. | .. | .. | 8,564 |
| | | Other Government.. | 6,094 | 672 | 479 | 44 | 5,220 | 382 | 235 | .. | .. | .. | .. | 2,456 | .. | 15,582 | .. | .. | .. | .. | 684 | 11,725 | .. | .. | .. | .. | .. | .. | 11,725 |
| | | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 20,983 | 3,818 | 3,760 | 735 | 27,481 | 1,298 | 2,019 | ... | ... | ... | ... | 7,646 | ... | 67,740 | ... | ... | ... | ... | 2,308 | 20,289 | ... | ... | ... | ... | ... | ... | 20,289 |
| 3 | Panch Maháls ... | Rayatwári .. .. | 2,283 | 29,491 | 2,424 | 4,928 | 2,569 | 102 | 271 | 38 | 868 | .. | .. | 614 | .. | 43,588 | .. | .. | .. | .. | 206 | 166 | .. | .. | .. | .. | .. | .. | 166 |
| | | Other Government.. | 370 | 299 | 217 | 106 | 265 | 6 | 18 | .. | .. | .. | .. | 40 | .. | 1,321 | .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | 1 |
| | | Alienated .. .. | 378 | 103 | 335 | 27 | 893 | 3 | 106 | .. | .. | .. | .. | 55 | .. | 1,900 | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 2 |
| | | Total ... | 3,031 | 29,893 | 2,976 | 5,061 | 3,727 | 111 | 395 | 38 | 868 | ... | ... | 709 | ... | 46,809 | ... | ... | ... | ... | 212 | 169 | ... | ... | ... | ... | ... | ... | 169 |
| 4 | Broach ... ... | Rayatwári .. .. | 8,007 | 944 | 531 | 23 | .. | .. | .. | .. | 687 | .. | 39,012 | .. | 4,686 | 53,890 | .. | .. | .. | .. | 2,034 | 1,627 | .. | .. | .. | .. | .. | .. | 1,627 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 8,007 | 944 | 531 | 23 | ... | ... | ... | ... | 687 | ... | 39,012 | ... | 4,686 | 53,890 | ... | ... | ... | ... | 2,034 | 1,627 | ... | ... | ... | ... | ... | ... | 1,627 |
| 5 | Surat ... ... | Rayatwári .. .. | 23,572 | 2,127 | 3,764 | 2,335 | 485 | 38,828 | 930 | .. | 2,665 | 17 | 3,535 | 1,659 | .. | 79,917 | 402 | 2,004 | .. | 1,225 | 3,631 | 427 | 2 | .. | .. | .. | .. | .. | 429 |
| | | Other Government.. | 271 | 25 | 62 | 3 | .. | 242 | 19 | .. | 13 | .. | 43 | 31 | .. | 709 | .. | 7 | .. | 3 | 10 | 4 | .. | .. | .. | .. | .. | .. | 4 |
| | | Alienated .. . | 12 | .. | 7 | 12 | 7 | 31 | 3 | .. | .. | .. | .. | 2 | .. | 74 | .. | 24 | .. | .. | 24 | 2 | .. | .. | .. | .. | .. | .. | 2 |
| | | Total ... | 23,855 | 2,152 | 3,833 | 2,350 | 492 | 39,101 | 952 | ... | 2,678 | 17 | 3,578 | 1,692 | ... | 80,700 | 402 | 2,035 | ... | 1,228 | 3,665 | 433 | 2 | ... | ... | ... | ... | ... | 435 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. | 41,986 | 55,210 | 4,292 | 13,135 | 1,290 | .. | 941 | 64,744 | 1,921 | 612 | 75 | 50 | .. | 184,256 | .. | .. | .. | .. | 7,994 | 4,916 | 309 | .. | .. | .. | .. | 41 | 5,266 |
| | | Other Government.. | 859 | 3,922 | 3 | 419 | .. | .. | .. | 314 | 17 | 38 | .. | .. | .. | 5,572 | ... | . | .. | .. | 11 | 9 | 2 | .. | . | .. | .. | .. | 11 |
| | | Alienated .. .. | 2,022 | 2,400 | 156 | 350 | 9 | .. | 9 | 1,295 | 19 | 15 | .. | 2 | .. | 6,367 | 45 | .. | .. | .. | 761 | 132 | .. | .. | .. | .. | .. | .. | 132 |
| | | Total ... | 44,867 | 61,622 | 4,451 | 13,904 | 1,299 | ... | 950 | 66,353 | 1,957 | 665 | 75 | 52 | ... | 196,195 | 45 | ... | ... | ... | 8,766 | 5,057 | 311 | ... | ... | ... | ... | 41 | 5,409 |
| 7 | Násik ... ... | Rayatwári .. .. | 19,948 | 79,555 | 2,904 | 24,109 | 2,565 | 4 | 31 | 58,901 | 1,833 | 9,832 | 3,777 | .. | .. | 203,459 | .. | .. | .. | .. | 7,835 | 1,601 | 25 | .. | .. | .. | .. | 30 | 1,656 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 806 | 6,480 | 18 | 453 | 2 | .. | .. | 2,190 | 208 | 729 | 342 | .. | .. | 11,228 | .. | .. | .. | .. | 1,234 | 135 | 4 | .. | .. | .. | .. | .. | 139 |
| | | Total ... | 20,754 | 86,035 | 2,922 | 24,562 | 2,567 | 4 | 31 | 61,091 | 2,041 | 10,561 | 4,119 | ... | ... | 214,687 | ... | ... | ... | ... | 9,069 | 1,736 | 29 | ... | ... | ... | ... | 30 | 1,795 |
| 8 | Ahmadnagar ... | Rayatwári .. .. | 26,573 | 105,774 | 5,441 | 1,143 | 13,271 | 766 | 28 | 37,090 | 1,412 | 392 | 76 | .. | .. | 191,966 | .. | .. | .. | .. | 4,115 | 7,771 | 721 | .. | .. | .. | .. | .. | 8,492 |
| | | Other Government.. | 2,523 | 7,051 | 586 | 48 | 987 | .. | 1 | 3,869 | 48 | 133 | 102 | .. | .. | 15,348 | .. | .. | .. | .. | 278 | 317 | 81 | .. | .. | .. | .. | .. | 398 |
| | | Alienated .. .. | 1,437 | 7,329 | 54 | .. | 756 | .. | 1 | 1,936 | .. | .. | .. | .. | .. | 11,513 | .. | .. | .. | .. | 190 | 305 | 228 | .. | .. | .. | .. | .. | 533 |
| | | Total ... | 30,533 | 1,20,154 | 6,081 | 1,191 | 15,014 | 766 | 30 | 42,895 | 1,460 | 525 | 178 | ... | ... | 218,827 | ... | ... | ... | ... | 4,583 | 8,393 | 1,030 | ... | ... | ... | ... | ... | 9,423 |
| 9 | Poona ... ... | Rayatwári .. .. | 13,037 | 51,684 | 617 | 3,443 | 15,165 | 1,734 | 853 | 19,920 | 2,143 | 1,071 | .. | .. | .. | 109,667 | .. | 64 | .. | .. | 19,523 | 1,288 | 18 | .. | .. | .. | .. | .. | 1,306 |
| | | Other Government. | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 2,753 | 9,906 | 96 | 1,037 | 2,979 | 135 | 464 | 3,921 | 341 | 58 | .. | .. | .. | 21,690 | .. | 38 | .. | .. | 5,196 | 85 | .. | .. | .. | .. | .. | ... | 85 |
| | | Total ... | 15,790 | 61,590 | 713 | 4,480 | 18,144 | 1,869 | 1,317 | 23,841 | 2,484 | 1,129 | ... | ... | ... | 131,357 | ... | 102 | ... | ... | 24,719 | 1,373 | 18 | ... | ... | .. | ... | ... | 1,391 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. | 46,121 | 63,439 | 1,892 | 275 | .. | .. | .. | 4,349 | 11 | 36 | 222 | .. | 13,301 | 129,646 | .. | .. | .. | .. | 5,070 | 3,068 | 43 | .. | 1 | .. | .. | .. | 3,111 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. | 902 | 3,476 | 36 | 1 | .. | .. | .. | 727 | 1 | .. | .. | .. | 757 | 5,900 | .. | .. | .. | .. | 315 | 112 | .. | .. | .. | .. | .. | .. | 112 |
| | | Total ... | 47,023 | 66,915 | 1,928 | 276 | ... | ... | ... | 5,076 | 12 | 36 | 222 | ... | 14,058 | 135,546 | ... | ... | ... | ... | 5,385 | 3,180 | 43 | ... | ... | ... | ... | ... | 3,223 |
| 11 | Sátára ... ... | Rayatwári .. | 44,274 | 67,920 | 8,587 | 18,283 | 53,134 | 2,483 | 198 | 43,593 | 1,280 | 411 | .. | .. | .. | 240,163 | .. | .. | .. | .. | 7,145 | 9,017 | 401 | .. | 2 | .. | .. | .. | 9,420 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. | 10,754 | 15,518 | 1,929 | 5,905 | 6,865 | 594 | 38 | 8,188 | 530 | 258 | .. | .. | .. | 50,579 | .. | .. | .. | .. | 1,701 | 1,105 | 10 | .. | .. | .. | .. | .. | 1,115 |
| | | Total ... | 55,028 | 83,438 | 10,516 | 24,188 | 59,999 | 3,077 | 236 | 51,781 | 1,810 | 669 | ... | ... | ... | 290,742 | ... | ... | ... | ... | 8,846 | 10,122 | 411 | ... | 2 | ... | ... | ... | 10,535 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum... ... | Rayatwári .. | 51,596 | 39,446 | 7,217 | 1,535 | 4,297 | 5,313 | 113 | 43,616 | 5,836 | 5,093 | .. | .. | .. | 164,062 | .. | .. | .. | .. | 7,081 | 16,746 | .. | .. | 77 | .. | .. | .. | 16,823 |
| | | Other Government | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. | 13,036 | 8,727 | 3,668 | 95 | 2,605 | 1,104 | 102 | 9,203 | 161 | 180 | .. | .. | .. | 38,881 | .. | .. | .. | .. | 1,875 | 3,662 | .. | .. | 22 | .. | .. | .. | 3,684 |
| | | Total ... | 64,632 | 48,173 | 10,885 | 1,630 | 6,902 | 6,417 | 215 | 52,819 | 5,997 | 5,273 | ... | ... | ... | 202,943 | ... | ... | ... | ... | 8,956 | 20,408 | ... | ... | 99 | ... | ... | ... | 20,507 |
| 13 | Bijápur ... ... | Rayatwári .. | 64,533 | 50,537 | 28,948 | .. | 3,791 | 3,476 | 613 | 19,176 | 18 | .. | .. | .. | 1 | 172,093 | .. | .. | .. | .. | 5,522 | 3,146 | .. | .. | .. | .. | .. | ... | 3,146 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated . | 6,891 | 4,345 | 3,174 | 1 | 145 | 497 | 341 | 2,633 | 19 | .. | .. | .. | .. | 18,046 | .. | .. | .. | .. | 767 | 221 | .. | .. | .. | .. | .. | .. | 221 |
| | | Total ... | 71,424 | 54,882 | 32,122 | 1 | 3,936 | 3,973 | 1,954 | 21,809 | 37 | ... | ... | ... | 1 | 190,139 | ... | ... | ... | ... | 6,289 | 3,367 | ... | ... | ... | ... | ... | ... | 3,367 |
| 14 | Dhárwár ... | Rayatwári .. | 56,335 | 44,438 | 43,750 | 3,129 | 11,599 | 4,865 | 455 | 42,874 | 534 | 78 | .. | .. | 1 | 208,058 | .. | .. | .. | .. | 9,820 | 1,652 | .. | .. | .. | .. | .. | 8 | 1,660 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. | 3,560 | 1,264 | 2,690 | 198 | 386 | 277 | 46 | 3,168 | 53 | .. | .. | .. | .. | 11,642 | .. | .. | .. | .. | 1,006 | 92 | .. | .. | .. | .. | .. | .. | 92 |
| | | Total ... | 59,895 | 45,702 | 46,440 | 3,327 | 11,985 | 5,142 | 501 | 46,042 | 587 | 78 | ... | ... | 1 | 219,700 | ... | ... | ... | ... | 10,826 | 1,744 | ... | ... | ... | ... | ... | 8 | 1,752 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári .. | 7,309 | 3,228 | 794 | 24,146 | .. | 4,164 | 3,567 | 1,056 | 254 | 2 | 157 | .. | .. | 44,677 | .. | .. | .. | .. | 5,233 | 1 | .. | .. | .. | .. | .. | .. | 1 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | 72 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. | 101 | .. | .. | 135 | .. | 10 | 15 | .. | .. | .. | .. | .. | .. | 261 | .. | .. | .. | .. | 37 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 7,410 | 3,228 | 794 | 24,281 | ... | 4,174 | 3,582 | 1,056 | 254 | 2 | 157 | ... | ... | 44,938 | ... | ... | ... | ... | 5,342 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| 16 | Kolába ... ... | Rayatwári .. | 528 | 2,396 | 903 | 1,045 | .. | 3,539 | 38 | .. | .. | .. | .. | .. | .. | 8,449 | 64 | 257 | .. | 1,933 | 2,254 | .. | .. | .. | .. | .. | .. | .. |
| | | Other Government | 2,004 | 1,258 | 1,752 | 7,006 | .. | 2,849 | .. | .. | .. | .. | .. | .. | .. | 14,869 | 18 | 15 | .. | .. | 33 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. | .. | 43 | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | 48 | .. | 32 | .. | .. | 32 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 2,532 | 3,697 | 2,655 | 8,051 | ... | 6,393 | 38 | ... | ... | ... | ... | ... | ... | 23,366 | 82 | 304 | ... | 1,933 | 2,319 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri ... | Rayatwári .. | Not | availab | le. | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Other Government.. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Alienated | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Kánara ... ... | Rayatwári .. | 211 | 190 | 687 | 1,120 | .. | .. | 2 | 1,829 | 372 | .. | .. | .. | 1,038 | 5,449 | .. | .. | .. | . | 18,164 | .. | .. | .. | 82 | .. | .. | .. | |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | | Alienated ... .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 211 | 190 | 687 | 1,120 | ... | ... | 2 | 1,829 | 372 | ... | ... | ... | 1,038 | 5,449 | ... | ... | ... | ... | 18,164 | ... | ... | ... | 82 | ... | .. | ... | 82 |
| | Total A. ... | Rayatwári .. | 4,22,114 | 6,08,180 | 1,22,642 | 1,01,455 | 1,56,464 | 66,433 | 11,443 | 3,37,388 | 19,834 | 17,544 | 46,354 | 11,024 | 19,027 | 1,940,402 | .. | .. | .. | .. | 111,405 | 61,000 | 1,519 | .. | 161 | .. | .. | 79 | 62,759 |
| | | Other Government.. | 12,687 | 23,771 | 15,500 | 8,678 | 22,125 | 3,571 | 595 | 13,703 | 78 | 171 | 145 | 4,175 | .. | 105,199 | .. | .. | .. | .. | 1,467 | 12,413 | 83 | .. | .. | .. | .. | .. | 12,496 |
| | | Alienated .. | 42,704 | 60,344 | 13,609 | 8,503 | 16,148 | 2,656 | 1,129 | 33,491 | 1,332 | 1,240 | 342 | 223 | 757 | 182,478 | .. | .. | .. | .. | 13,451 | 5,914 | 242 | .. | 22 | .. | .. | .. | 6,178 |
| | | Total ... | 4,77,505 | 6,92,295 | 1,51,751 | 1,18,636 | 1,94,737 | 72,660 | 13,167 | 384,582 | 21,244 | 18,955 | 47,341 | 15,422 | 19,784 | 2,228,079 | ... | ... | ... | ... | 126323 | 79,327 | 1,844 | ... | 183 | ... | ... | 79 | 81,433 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | ... | 3,550 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 13,703 | 17,253 | ... | ... | ... | ... | 2,455 | 198 | ... | ... | ... | ... | ... | 343 | 541 |
| 20 | Haidarabad ... ... ... ... | | 1 | 3,262 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 13,151 | 16,414 | ... | ... | ... | ... | 11,577 | 3,153 | ... | ... | ... | ... | ... | 19 | 3,172 |
| 21 | Shikárpur ... ... ... ... | | ... | 24,417 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 73,036 | 97,453 | ... | ... | ... | ... | 11,897 | 4,361 | ... | ... | ... | ... | ... | 191 | 4,552 |
| 22 | Upper Sind Frontier ... ... | | ... | 2,937 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4,554 | 7,491 | ... | ... | ... | ... | 694 | 45 | ... | ... | ... | ... | ... | 4 | 49 |
| 23 | Thar and Párkar ... ... ... | | Not | availab | le. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total B ... | | 1 | 34,166 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,04,444 | 138,611 | ... | ... | ... | ... | 26,623 | 7,757 | ... | ... | ... | .. | ... | 557 | 8,314 |
| | Grand Total ... | | 4,77,506 | 7,26,461 | 1,51,751 | 1,18,636 | 1,94,737 | 72,660 | 13,167 | 384,582 | 21,244 | 18,955 | 47,341 | 15,422 | 1,24,228 | 2,366,690 | ... | ... | ... | ... | 152946 | 87,084 | 1,844 | ... | 183 | ... | ... | 636 | 89,747 |

# III.—Crops, 1885-86—*continued.*

| No. | District. | | V.—Condiments and Spices. | | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cardamom (Veldode), Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (A'le), Zingiber officinale. | Black Pepper (Miri), Piper nigrum. | Betel-leaves (Páne), Piper-betel. | Betelnut (Supári), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bálant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jíre), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotus ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Rái), Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us, Sherdi), Saccharum officinarum. | Others. | Total VII. |
| | 1 | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| 1 | Ahmadabad ... | Rayatwári ... | ... | 1,890 | 438 | ... | ... | ... | ... | ... | ... | ... | 22 | 50 | ... | 9 | 116 | ... | 2,525 | ... | ... | ... | 2,106 | ... | 2,106 |
| | | Other Government ... | ... | 207 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 208 | ... | ... | ... | 307 | ... | 307 |
| | | Alienated ... | ... | 29 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 45 | ... | 75 | ... | ... | ... | 186 | ... | 186 |
| | | Total ... | ... | 2,126 | 440 | ... | ... | ... | ... | ... | ... | ... | 22 | 50 | ... | 9 | 161 | ... | 2,808 | ... | ... | ... | 2,599 | ... | 2,599 |
| 2 | Kaira ... | Rayatwári ... | ... | 1,200 | 165 | ... | ... | ... | 18 | ... | 7 | ... | 1,078 | 167 | 126 | 27 | 39 | ... | 2,827 | ... | ... | ... | 885 | ... | 885 |
| | | Other Government ... | ... | 425 | 131 | ... | ... | ... | 5 | ... | ... | ... | 1,947 | 1 | 13 | ... | 25 | ... | 2,547 | ... | ... | ... | 865 | ... | 865 |
| | | Alienatep ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 1,625 | 296 | ... | ... | ... | 23 | ... | 7 | ... | 3,025 | 168 | 139 | 27 | 64 | ... | 5,374 | ... | ... | ... | 1,750 | ... | 1,750 |
| 3 | Panch Maháls ... | Rayatwári ... | ... | 341 | 5 | ... | ... | ... | 1 | ... | 3 | ... | 43 | ... | ... | ... | 16 | ... | 409 | ... | ... | ... | 341 | ... | 341 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | 23 | ... | 23 |
| | | Alienated ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | 22 | ... | 22 |
| | | Total ... | ... | 341 | 5 | ... | ... | ... | 1 | ... | 3 | ... | 43 | ... | ... | ... | 16 | ... | 409 | ... | ... | ... | 386 | ... | 386 |
| 4 | Broach ... | Rayatwári ... | ... | 218 | 48 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 23 | ... | 93 | 382 | ... | ... | ... | 123 | ... | 123 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 218 | 48 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 23 | ... | 93 | 382 | ... | ... | ... | 123 | ... | 123 |
| 5 | Surat ... | Rayatwári ... | ... | 594 | 188 | ... | ... | ... | 82 | ... | 16 | 15 | ... | 14 | ... | 24 | 69 | 7 | 1,009 | ... | ... | ... | 6,523 | ... | 6,523 |
| | | Other Government ... | ... | 16 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 16 | ... | ... | ... | 72 | ... | 72 |
| | | Alienated ... | ... | 37 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 37 | ... | ... | ... | 15 | ... | 15 |
| | | Total ... | ... | 647 | 188 | ... | ... | ... | 82 | ... | 16 | 15 | ... | 14 | ... | 24 | 69 | 7 | 1,062 | ... | ... | ... | 6,610 | ... | 6,610 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | ... | 10,776 | 8 | ... | 244 | ... | 1,518 | 3,201 | 2,713 | 6,110 | ... | 219 | ... | 484 | 514 | ... | 25,787 | ... | ... | ... | 3,343 | ... | 3,343 |
| | | Other Government ... | ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | 15 | ... | ... | ... | 1 | ... | 1 |
| | | Alienated ... | ... | 337 | ... | ... | ... | ... | 13 | 213 | 120 | 57 | ... | 41 | ... | 80 | 44 | ... | 905 | ... | ... | ... | 103 | ... | 103 |
| | | Total ... | ... | 11,122 | 8 | ... | 244 | ... | 1,531 | 3,414 | 2,833 | 6,167 | ... | 260 | ... | 564 | 564 | ... | 26,707 | ... | ... | ... | 3,447 | ... | 3,447 |
| 7 | Násik ... | Rayatwári ... | ... | 5,508 | 16 | ... | 139 | ... | 93 | 38 | 28 | 7 | ... | ... | ... | 36 | 362 | ... | 6,227 | ... | ... | ... | 8,044 | .. | 8,044 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | 530 | ... | ... | 40 | ... | ... | ... | ... | 3 | ... | ... | ... | ... | 41 | ... | 614 | ... | ... | ... | 860 | ... | 860 |
| | | Total ... | ... | 6,038 | 16 | ... | 179 | ... | 93 | 38 | 28 | 10 | ... | ... | ... | 36 | 403 | ... | 6,841 | ... | ... | ... | 8,904 | ... | 8,904 |
| 8 | Ahmadnagar ... | Rayatwári ... | ... | 5,900 | ... | ... | 300 | ... | ... | ... | 2 | 10 | ... | ... | ... | 6 | 29 | ... | 6,247 | ... | ... | ... | 3,532 | ... | 3,532 |
| | | Other Government ... | ... | 347 | ... | ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 351 | ... | ... | ... | 179 | ... | 179 |
| | | Alienated ... | ... | 329 | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | ... | 336 | ... | ... | ... | 138 | ... | 138 |
| | | Total ... | ... | 6,576 | ... | ... | 307 | ... | ... | ... | 2 | 10 | ... | ... | ... | 6 | 33 | ... | 6,934 | ... | ... | ... | 3,849 | ... | 3,849 |
| 9 | Poona ... | Rayatwári ... | ... | 11,106 | 8 | .. | 393 | ... | 92 | ... | ... | 469 | ... | ... | ... | ... | 754 | ... | 12,822 | ... | ... | ... | 4,896 | ... | 4,896 |
| | | Other Government ... | ... | ..... | ... | .. | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | 1,983 | 1 | .. | 414 | ... | 35 | ... | ... | 4 | ... | ... | ... | ... | 121 | ... | 2,558 | ... | ... | ... | 986 | ... | 986 |
| | | Total ... | ... | 13,089 | 9 | ... | 807 | ... | 127 | ... | ... | 473 | ... | ... | ... | .. | 875 | ... | 15,380 | ... | ... | ... | 5,882 | ... | 5,882 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | ... | 7,313 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,332 | 9,645 | ... | ... | ... | 2,945 | ... | 2,945 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 339 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 42 | 381 | ... | ... | .. | 112 | ... | 112 |
| | | Total | ... | 7,652 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,374 | 10,026 | ... | ... | ... | 3,057 | ... | 3,057 |
| 11 | Sátára | Rayatwári | ... | 10,666 | 26 | ... | 327 | 2 | 3,132 | 276 | ... | 285 | ... | 32 | ... | | 264 | 35 | 15,054 | ... | ... | ... | 9,584 | ... | 9,584 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 2,910 | 47 | ... | 51 | ... | 823 | 43 | ... | 72 | ... | 37 | ... | ... | 64 | ... | 4,047 | ... | ... | ... | 2,950 | ... | 2,950 |
| | | Total | ... | 13,576 | 73 | ... | 378 | 2 | 3,955 | 319 | ... | 357 | ... | 69 | ... | 9 | 328 | 35 | 19,101 | ... | ... | ... | 12,534 | ... | 12,534 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | ... | 13,715 | ... | ... | 79 | ... | 181 | 61 | ... | 992 | ... | ... | ... | 177 | 586 | ... | 15,791 | ... | ... | ... | 6,272 | ... | 6,272 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 3,434 | ... | ... | 91 | 2 | 63 | 45 | ... | 598 | ... | ... | ... | ... | 179 | ... | 4,412 | ... | ... | ... | 2,153 | ... | 2,153 |
| | | Total | ... | 17,149 | ... | ... | 170 | 2 | 244 | 106 | ... | 1,590 | ... | ... | ... | 177 | 765 | ... | 20,203 | ... | ... | ... | 8,425 | ... | 8,425 |
| 13 | Bijápur | Rayatwári | ... | 4,128 | ... | ... | 51 | ... | 8 | 1 | ... | 19 | ... | ... | 1 | 2 | 130 | ... | 4,340 | ... | ... | ... | 1,234 | ... | 1,234 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 413 | .... | ... | 3 | ... | 3 | ... | ... | 3 | ... | ... | ... | ... | 8 | ... | 430 | ... | ... | ... | 125 | ... | 125 |
| | | Total | ... | 4,541 | ... | ... | 54 | ... | 11 | 1 | ... | 22 | ... | ... | 1 | 2 | 138 | ... | 4,770 | ... | ... | ... | 1,359 | ... | 1,359 |
| 14 | Dhárwár | Rayatwári | ... | 51,934 | 2 | ... | 1,094 | 472 | 37 | 8 | 1 | 530 | ... | 31 | 15 | 78 | 719 | 11 | 54,932 | ... | ... | ... | 4,198 | .. | 4,198 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 1,839 | ... | ... | 63 | 64 | ... | ... | ... | 4 | ... | ... | ... | 1 | ... | ... | 1,971 | ... | ... | ... | 467 | .. | 467 |
| | | Total | ... | 53,773 | 2 | .. | 1,157 | 536 | 37 | 8 | 1 | 534 | ... | 31 | 15 | 79 | 719 | 11 | 56,903 | ... | ... | ... | 4,665 | ... | 4,665 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | ... | 391 | 152 | ... | 152 | 31 | 64 | ... | ... | 528 | ... | ... | ... | 6 | 2 | ... | 1,326 | ... | ... | ... | 1,541 | ... | 1,541 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 391 | 152 | ... | 152 | 31 | 64 | ... | ... | 528 | ... | ... | ... | 6 | 2 | ... | 1,326 | ... | ... | ... | 1,541 | ... | 1,541 |
| 16 | Kolába | Rayatwári | ... | 42 | ... | ... | 21 | 351 | ... | ... | ... | 52 | ... | ... | ... | ... | ... | ... | 466 | ... | ... | ... | 61 | ... | 61 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ..... | .. | ... | ... | 18 | ... | 18 |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 42 | ... | ... | 21 | 351 | ... | ... | ... | 52 | ... | ... | ... | ... | ... | ... | 466 | ... | ... | ... | 79 | ... | 79 |
| 17 | Ratnágiri | Rayatwári | ... | Not available. | | | | | | | | | | | | | | | | | | | | | | |
| | | Other Government | ... | | | | | | | | | | | | | | | | | | | | | | | |
| | | Alienated | ... | | | | | | | | | | | | | | | | | | | | | | | |
| | | Total | ... | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Kánara | Rayatwári | ... | 539 | 248 | 5 | 811 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6,947 | 8,550 | ... | ... | ... | 3,262 | ... | 3,262 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 539 | 248 | 5 | 811 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6,947 | 8,550 | ... | ... | ... | 3,262 | ... | 3,262 |
| | Total A | Rayatwári | ... | 539 | 1,25,970 | 1,061 | 811 | 2,800 | 856 | 5,226 | 3,585 | 2,770 | 9,017 | 1,143 | 513 | 142 | 881 | 3,600 | 9,425 | 1,68,339 | ... | ... | ... | 58,890 | ... | 58,890 |
| | | Other Government | ... | ... | 1,004 | 132 | ... | 4 | ... | 5 | ... | ... | ... | 1,947 | 1 | 13 | ... | 31 | ... | 3,137 | ... | ... | ... | 1,465 | ... | 1,465 |
| | | Alienated | ... | ... | 12,180 | 49 | ... | 665 | 66 | 937 | 301 | 120 | 741 | ... | 78 | ... | 81 | 506 | 42 | 15,766 | ... | ... | ... | 8,117 | ... | 8,117 |
| | | Total | ... | 539 | 1,39,154 | 1,242 | 811 | 3,469 | 922 | 6,168 | 3,886 | 2,890 | 9,758 | 3,090 | 592 | 155 | 962 | 4,137 | 9,467 | 1,87,242 | ... | ... | ... | 68,472 | ... | 68,472 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 136 | 136 | ... | ... | ... | 450 | ... | 450 |
| 20 | Haidarabad | | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 32 | 32 | ... | ... | 3 | 537 | ... | 537 |
| 21 | Shikárpur | | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,037 | 2,037 | ... | ... | 4 | 706 | ... | 706 |
| 22 | Upper Sind Frontier | | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 113 | 113 | ... | ... | 1 | 15 | ... | 15 |
| 23 | Thar and Párkar | | ... | Not available. | | | | | | | | | | | | | | | | | | | | | | |
| | | Total B | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,318 | 2,318 | ... | ... | 8 | 1,708 | ... | 1,708 |
| | | Grand Total | ... | 539 | 1,39,154 | 1,242 | 811 | 3,469 | 922 | 6,168 | 3,886 | 2,890 | 9,758 | 3,090 | 592 | 155 | 962 | 4,137 | 11,785 | 1,89,560 | ... | ... | 8 | 70,180 | ... | 70,180 |

# III.—Crops, 1885-86—*continued.*

| No. | District. | VIII.—Oil Seeds. Sesame (Til), Sesamum Indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Erandya) Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Niger-seed (Khurásani), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobare) Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli) Indigofera tinctoria. | Safflower (Kusumba), Carthamus Persicus. | Morinda (Al, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tág), Crotolaria juncea. | Hemp (Ambádi, Sherla), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder Net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad... Rayatwári .. | 14,026 | 771 | 6,944 | .. | 259 | .. | .. | .. | .. | 22,000 | 190 | 593 | .. | .. | 783 | 146,547 | 855 | .. | . | .. | .. | 147,402 | 696,797 | 18,522 | 678,275 |
| | Other Government. | 11,985 | 207 | 908 | .. | .. | .. | .. | .. | .. | 13,100 | .. | 9 | .. | .. | 9 | 159,179 | 605 | .. | ... | .. | .. | 159,784 | 588,969 | 4,835 | 584,134 |
| | Alienated ... .. | 537 | 11 | 484 | .. | 2 | .. | .. | .. | .. | 1,034 | .. | .. | .. | .. | .. | 11,369 | 34 | .. | .. | .. | .. | 11,403 | 57,627 | 3,668 | 53,959 |
| | Total .. | 26,548 | 989 | 8,336 | ... | 261 | ... | ... | ... | ... | 36,134 | 190 | 602 | ... | ... | 792 | 317,095 | 1,494 | ... | ... | .. | ... | 318,589 | 1,343,393 | 27,025 | 1,316,368 |
| 2 | Kaira ... Rayatwári .. | 5,091 | 32 | 4,196 | 18 | 20 | .. | .. | .. | .. | 9,357 | 82 | 2,782 | .. | .. | 2,864 | 6,336 | 20 | 865 | .. | .. | .. | 7,221 | 561,812 | 19,671 | 542,141 |
| | Other Government. | 1,888 | .. | 492 | 23 | .. | .. | .. | .. | .. | 2,403 | 84 | 183 | .. | .. | 267 | 3,881 | .. | 408 | . | .. | .. | 4,289 | 158,319 | 5,287 | 153,032 |
| | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .... | .. | .... |
| | Total ... | 6,979 | 32 | 4,688 | 41 | 20 | ... | ... | ... | ... | 11,760 | 166 | 2,965 | ... | ... | 3,131 | 10,217 | 20 | 1,273 | ... | ... | ... | 11,510 | 720,131 | 24,958 | 695,173 |
| 3 | Panch Maháls Rayatwári .. | 25,681 | 4 | 792 | .. | 116 | .. | .. | .. | .. | 26,593 | .. | .. | .. | . | .. | 85 | 1,282 | .. | .. | .. | 327 | 1,694 | 256,960 | 32,194 | 224,766 |
| | Other Government. | 240 | .. | 289 | .. | .. | .. | .. | .. | .. | 529 | .. | .. | .. | .. | .. | 488 | .. | .. | .. | .. | 1 | 489 | 12,855 | 84 | 12,771 |
| | Alienated .. .. | 28 | .. | 199 | .. | .. | .. | .. | .. | .. | 227 | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | 35 | 35 | 13,849 | 137 | 13,712 |
| | Total ... | 25,949 | 4 | 1,280 | ... | 116 | ... | ... | ... | ... | 27,349 | ... | ... | ... | ... | ... | 573 | 1,282 | ... | ... | ... | 363 | 2,218 | 283,664 | 32,415 | 251,249 |
| 4 | Broach ... Rayatwári .. | 9,549 | .. | .. | .. | .. | .. | .. | .. | 1,734 | 11,283 | 168 | 17 | .. | .. | 185 | 243,568 | 39 | .. | .. | .. | .. | 243,607 | 555,620 | 1,307 | 554,313 |
| | Other Government. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .... | .. | .... |
| | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .... | .. | .... |
| | Total ... | 9,549 | ... | ... | ... | ... | ... | ... | ... | 1,734 | 11,283 | 168 | 17 | ... | ... | 185 | 243,568 | 39 | ... | ... | ... | ... | 243,607 | 555,620 | 1,307 | 554,313 |
| 5 | Surat... ... Rayatwari . .. | 2,377 | 2 | 34,603 | .. | 8 | 91 | 61 | .. | .. | 37,142 | .. | 98 | 23 | .. | 121 | 91,679 | .. | 1,824 | .. | .. | .. | 93,503 | 524,710 | 49,126 | 475,584 |
| | Other Government. | 11 | .. | 419 | .. | .. | .. | .. | .. | .. | 430 | .. | .. | .. | .. | ... | 923 | .. | 2 | .. | .. | .. | 925 | 5,062 | 342 | 4,720 |
| | Alienated .. .. | 1 | .. | 73 | .. | .. | .. | .. | .. | .. | 74 | .. | .. | .. | .. | .. | 229 | .. | 1 | .. | .. | .. | 230 | 8,740 | 11 | 3,729 |
| | Total ... | 2,389 | 2 | 35,095 | ... | 8 | 91 | 61 | ... | ... | 37,646 | ... | 98 | 23 | ... | 121 | 92,831 | ... | 1,827 | ... | ... | ... | 94,658 | 533,512 | 49,479 | 484,033 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... Rayatwári .. | 182,093 | 171,515 | 1,414 | 2,701 | .. | 5,146 | 8,098 | .. | .. | 370,967 | 3,428 | 322 | .. | 3,525 | 7,275 | 637,484 | 488 | 1,837 | .. | .. | .. | 639,809 | 2,732,485 | 11,361 | 2,721,124 |
| | Other Government. | 4,780 | 1,264 | .. | 13 | .. | 1,453 | 77 | .. | .. | 7,587 | .. | .. | .. | .. | .. | 2,288 | 379 | .. | .. | .. | .. | 2,667 | 62,843 | .. | 62,843 |
| | Alienated .. .. | 6,852 | 3,901 | 9 | 1,378 | .. | 46 | 44 | .. | .. | 12,230 | 34 | .. | .. | .. | 34 | 28,434 | 52 | 101 | .. | .. | .. | 28,587 | 109,879 | 158 | 109,721 |
| | Total ... | 193,725 | 176,680 | 1,423 | 4,092 | ... | 6,645 | 8,219 | ... | ... | 390,784 | 3,462 | 322 | ... | 3,525 | 7,309 | 668,206 | 919 | 1,938 | ... | ... | ... | 671,063 | 2,905,207 | 11,519 | 2,893,688 |
| 7 | Násik ... Rayatwári .. | 37,041 | 84,576 | 4,026 | 10,886 | 1 | 108,981 | 22,354 | .. | .. | 267,865 | .. | 695 | .. | .. | 695 | 2.620 | 2,359 | 42 | .. | .. | 6 | 5,027 | 1,830,705 | 23,684 | 1,807,021 |
| | Other Government. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .... | .. | .... |
| | Alienated .. .. | 1,136 | 4,044 | 128 | 536 | .. | 5,035 | 1,000 | .. | .. | 11,879 | .. | 30 | .. | .. | 30 | .... | 125 | ... | .. | .. | .. | 125 | 99,838 | 1,096 | 98,742 |
| | Total ... | 38,177 | 88,620 | 4,154 | 11,422 | 1 | 114,016 | 23,354 | ... | ... | 279,744 | ... | 725 | ... | ... | 725 | 2,620 | 2,484 | 42 | ... | ... | 6 | 5,152 | 1,930,543 | 24,780 | 1,905,763 |
| 8 | Ahmadnagar . Rayatwári .. | 12,266 | 17,017 | 256 | 66,036 | .. | 29,218 | 7,680 | .. | .. | 132,473 | .. | 6,092 | .. | .. | 6,092 | 14,864 | 130 | 4,215 | .. | .. | .. | 19,209 | 2,302,591 | 20,879 | 2,281,712 |
| | Other Government. | 1,563 | 1,765 | 6 | 6,783 | .. | 1,147 | 130 | .. | .. | 11,394 | .. | 105 | .. | .. | 105 | 1,717 | 2 | 320 | .. | .. | .. | 2,039 | 166,354 | 926 | 165,428 |
| | Alienated .. .. | 1,573 | 1,435 | 3 | 3,302 | .. | 43 | 42 | .. | .. | 6,398 | .. | .. | .. | .. | .. | 918 | 8 | 27 | .. | .. | .. | 953 | 146,942 | 526 | 146,416 |
| | Total ... | 15,402 | 20,217 | 265 | 76,121 | ... | 30,408 | 7,852 | ... | ... | 150,265 | ... | 6,197 | ... | ... | 6,197 | 17,499 | 140 | 4,562 | ... | ... | ... | 22,201 | 2,615,887 | 22,331 | 2,593,556 |
| 9 | Poona ... Rayatwári .. | 27,458 | 718 | 34 | 90,235 | .. | 13,960 | 6,079 | .. | .. | 138,484 | .. | .. | .. | .. | .. | 230 | 466 | 1,730 | .. | .. | .. | 2,426 | 1,782,042 | 46,046 | 1,735,996 |
| | Other Government. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .... | ... | .... |
| | Alienated .. .. | 4,348 | 84 | 35 | 9,635 | .. | 2,918 | 2,427 | .. | .. | 19,447 | .. | .. | .. | .. | .. | .... | 93 | 135 | .. | .. | .. | 228 | 312,138 | 8,399 | 303,739 |
| | Total | 31,806 | 802 | 69 | 99,870 | | 16,878 | 8,506 | ... | ... | 157,931 | ... | ... | ... | ... | ... | 230 | 559 | 1,865 | ... | ... | ... | 2,654 | 2,094,180 | 54,445 | 2,039,735 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. | 2,830 | 31,949 | .. | .. | .. | .. | .. | .. | 191,311 | 226,090 | .. | .. | 425 | .. | 425 | 6,438 | 106 | 15,458 | .. | .. | .. | 22,002 | 1,977,236 | 25,410 | 1,951,826 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 355 | 1,799 | .. | .. | .. | .. | .. | .. | 7,092 | 9,246 | .. | .. | .. | .. | .. | 193 | .. | 142 | .. | .. | .. | 335 | 97,024 | 2,009 | 95,015 |
| | | Total ... | 3,185 | 33,748 | ... | ... | ... | ... | ... | ... | 198,403 | 235,336 | ... | ... | 425 | ... | 425 | 6,631 | 106 | 15,600 | ... | ... | ... | 22,337 | 2,074,260 | 27,419 | 2,046,841 |
| 11 | Sátára ... | Rayatwári .. .. | 315 | 2,316 | .. | .. | .. | 19,005 | 39,732 | 738 | .. | 62,106 | .. | 23,050 | .. | .. | 23,050 | 15,229 | 3,096 | 7,583 | .. | .. | .. | 25,908 | 1,539,664 | 74,128 | 1,465,536 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 94 | 523 | .. | .. | .. | 5,275 | 11,402 | 200 | .. | 17,494 | .. | 3,559 | .. | .. | 3,559 | 1,011 | 743 | 1,231 | .. | .. | .. | 2,985 | 322,478 | 19,698 | 302,780 |
| | | Total ... | 409 | 2,839 | ... | ... | ... | 24,280 | 51,134 | 938 | ... | 79,600 | ... | 26,609 | ... | ... | 26,609 | 16,240 | 3,839 | 8,814 | ... | ... | ... | 28,893 | 1,862,142 | 93,826 | 1,768,316 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. | 7,515 | 5,154 | .. | 30,957 | .. | 1,416 | 9,619 | 12,913 | .. | 67,574 | .. | .. | .. | .. | .. | 119,631 | 1,780 | 2,577 | .. | .. | .. | 123,988 | 1,472,131 | 91,144 | 1,380,987 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 713 | 572 | .. | 12,682 | .. | 156 | 1,715 | 2,637 | .. | 18,475 | .. | .. | .. | .. | .. | 23,742 | 570 | 506 | .. | .. | .. | 24,818 | 328,372 | 16,705 | 311,667 |
| | | Total ... | 8,228 | 5,726 | ... | 43,639 | ... | 1,572 | 11,334 | 15,550 | ... | 86,049 | ... | ... | ... | ... | ... | 143,373 | 2,350 | 3,083 | ... | ... | .. | 148,806 | 1,800,503 | 107,849 | 1,692,654 |
| 13 | Bijápur ... | Rayatwári .. .. | 15,107 | 72,227 | 6,139 | 78,234 | .. | 16,456 | 36 | .. | .. | 188,199 | .. | .. | .. | .. | .. | 147,162 | 49 | 6,498 | .. | .. | .. | 153,709 | 2,338,951 | 1,707 | 2,337,244 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 1,167 | 9,433 | 755 | 7,468 | .. | 1,510 | .. | .. | .. | 20,333 | .. | .. | .. | .. | .. | 19,235 | 4 | 547 | .. | .. | .. | 19,786 | 259,736 | 276 | 259,460 |
| | | Total ... | 16,274 | 81,660 | 6,894 | 85,702 | ... | 17,966 | 36 | ... | ... | 208,532 | ... | ... | ... | ... | ... | 166,397 | 53 | 7,045 | ... | ... | ... | 173,495 | 2,598,687 | 1,983 | 2,596,704 |
| 14 | Dhárwár ... | Rayatwári .. .. | 6,131 | 23,635 | 18,723 | 33,463 | .. | 2,509 | 3 | .. | .. | 84,464 | .. | .. | .. | .. | .. | 449,191 | 172 | 5,184 | .. | .. | .. | 454,547 | 1,946,663 | 21,425 | 1,925,238 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 97 | 946 | 1,043 | 1,334 | .. | 135 | .. | .. | .. | 3,555 | .. | .. | .. | .. | .. | 13,226 | 15 | 269 | .. | .. | .. | 13,510 | 107,574 | 1,265 | 106,309 |
| | | Total ... | 6,228 | 24,581 | 19,766 | 34,797 | ... | 2,644 | 3 | ... | ... | 88,019 | ... | ... | ... | ... | ... | 462,417 | 187 | 5,453 | ... | ... | ... | 468,057 | 2,054,237 | 22,690 | 2,031,547 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. | 8,286 | 1 | 2,854 | 2 | 41 | 11,040 | .. | .. | 83 | 22,307 | .. | .. | .. | .. | .. | .. | 3,462 | 1,887 | .. | .. | .. | 5,349 | 514,518 | 5,786 | 508,732 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 742 | 2 | 740 |
| | | Alienated .. .. | 17 | .. | .. | .. | .. | 180 | .. | .. | .. | 197 | .. | .. | .. | .. | .. | .. | 8 | 6 | .. | .. | .. | 14 | 7,550 | 47 | 7,503 |
| | | Total ... | 8,303 | 1 | 2,854 | 2 | 41 | 11,220 | ... | ... | 83 | 22,504 | ... | ... | ... | ... | ... | ... | 3,470 | 1,893 | ... | ... | ... | 5,363 | 522,810 | 5,835 | 516,975 |
| 16 | Kolába ... | Rayatwári .. .. | 1,366 | .. | 4 | .. | .. | .. | .. | .. | 187 | 1,557 | .. | .. | .. | .. | .. | .. | 150 | 2 | .. | .. | .. | 152 | 180,219 | 4,559 | 175,660 |
| | | Other Government.. | 5,448 | .. | .. | .. | .. | .. | .. | .. | .. | 5,448 | .. | .. | .. | .. | .. | .. | 56 | .. | .. | .. | .. | 56 | 187,224 | 4,555 | 182,669 |
| | | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1,174 | 5 | 1,169 |
| | | Total ... | 6,814 | ... | 4 | ... | ... | ... | ... | ... | 187 | 7,005 | ... | ... | ... | ... | ... | ... | 206 | 2 | ... | ... | ... | 208 | 368,617 | 9,119 | 359,498 |
| 17 | Ratnágiri ... | Rayatwári .. .. | Not available. | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Other Government.. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Alienated .. .. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Kánara ... | Rayatwári .. .. | 172 | .. | .. | .. | .. | .. | .. | .. | 468 | 640 | .. | .. | .. | .. | .. | .. | 85 | 91 | .. | .. | 3 | 179 | 218,799 | 10,464 | 208,335 |
| | | Other Government.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 172 | ... | ... | ... | ... | ... | ... | ... | 468 | 640 | ... | ... | ... | ... | ... | ... | 85 | 91 | ... | ... | 3 | 179 | 218,799 | 10,464 | 208,335 |
| | Total A ... | Rayatwári .. .. | 357,304 | 409,917 | 79,985 | 312,532 | 445 | 207,822 | 93,662 | 13,651 | 193,783 | 1,669,101 | 3,868 | 33,649 | 448 | 3,525 | 41,490 | 1,881,064 | 14,539 | 49,793 | .. | .. | 336 | 1,945,732 | 21,431,903 | 457,413 | 20,974,490 |
| | | Other Government.. | 25,915 | 3,236 | 2,114 | 6,819 | .. | 2,600 | 207 | .. | .. | 40,891 | 84 | 297 | .. | .. | 381 | 168,476 | 1,042 | 730 | .. | .. | 1 | 170,249 | 1,182,368 | 16,031 | 1,166,337 |
| | | Alienated .. .. | 16,918 | 22,748 | 2,729 | 36,335 | 2 | 15,298 | 16,630 | 2,837 | 7,092 | 120,585 | 34 | 3,589 | .. | .. | 3,623 | 98,357 | 1,652 | 2,965 | .. | .. | 35 | 103,009 | 1,867,921 | 54,000 | 1,813,921 |
| | | Total ... | 400,137 | 435,901 | 84,828 | 355686 | 447 | 225,720 | 110,499 | 16488 | 200,875 | 1,830,581 | 3,986 | 37,535 | 448 | 3,525 | 45,494 | 2,147,897 | 17,233 | 53,488 | ... | ... | 372 | 2,218,990 | 24,482,192 | 527,444 | 23,954,748 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | 3,484 | ... | ... | ... | ... | ... | ... | ... | 22,064 | 25,548 | ... | ... | ... | 98 | 98 | 612 | ... | ... | ... | ... | 44 | 656 | 227,449 | 11,332 | 216,117 |
| 20 | Haidarabad ... ... ... | | 36,168 | 11 | ... | ... | ... | ... | 12,048 | ... | 5,451 | 53,678 | ... | ... | ... | 6,625 | 6,625 | 57,658 | ... | ... | ... | ... | 303 | 57,961 | 495,465 | 3,482 | 491,983 |
| 21 | Shikárpur ... ... ... | | 24,275 | ... | ... | ... | ... | ... | ... | ... | 28,162 | 52,437 | ... | ... | ... | 3,031 | 3,031 | 8,310 | ... | ... | ... | ... | 29 | 8,339 | 750,487 | 125,952 | 624,535 |
| 22 | Upper Sind Frontier ... ... | | 45,735 | ... | ... | ... | ... | ... | ... | ... | 5,548 | 51,283 | ... | ... | ... | 663 | 663 | 1,445 | ... | ... | ... | ... | 14 | 1,459 | 145,312 | 8,163 | 137,149 |
| 23 | Thar and Párkar ... ... | | Not available. | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Total B ... | 109,662 | 11 | ... | ... | ... | ... | 12,048 | ... | 61,225 | 182,946 | ... | ... | ... | 10,417 | 10,417 | 68,025 | ... | ... | ... | ... | 390 | 68,415 | 1,618,713 | 148,929 | 1,469,784 |
| | | Grand Total ... | 509,799 | 435,912 | 84,828 | 355686 | 447 | 225,720 | 122,547 | 16488 | 262,100 | 2,013,527 | 3,986 | 37,535 | 448 | 13,942 | 55,911 | 2,215,922 | 17,233 | 53,488 | ... | ... | 762 | 2,287,405 | 26,100,905 | 676,373 | 25,424,532 |

# IV.—Irrigation, 1885-86.

| No. | District. | | Net Area cropped. | Area irrigated from canals. | Area irrigated from other sources. | Total Area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct Area cropped with irrigation more than once. | Balance not irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad... | Rayatwári .. .. .. | 678,275 | 4,172 | 51,042 | 55,214 | 14,351 | 19,936 | 12,552 | 2,046 | 4,612 | 2,277 | .... | 55,774 | 560 | 55,214 |
| | | Other Government .. .. | 584,134 | 105 | 12,949 | 13,054 | 5,016 | 5,089 | 1,933 | 298 | 545 | 173 | .... | 13,054 | .... | 13,054 |
| | | Alienated .. .. .. | 53,959 | 340 | 4,632 | 4,972 | 1,518 | 2,241 | 903 | 178 | 102 | 30 | .... | 4,972 | .... | 4,972 |
| | | Total ... | 1,316,368 | 4,617 | 68,623 | 73,240 | 20,885 | 27,266 | 15,388 | 2,522 | 5,259 | 2,480 | ... | 73,800 | 560 | 73,240 |
| 2 | Kaira ... | Rayatwári .. .. .. | 542,141 | 5,763 | 28,251 | 34,014 | 5,071 | 13,636 | 5,943 | 390 | 3,449 | 8,404 | .... | 37,393 | 3,379 | 34,014 |
| | | Other Government .. .. | 153,032 | .... | 16,392 | 16,392 | 901 | 845 | 1,228 | 865 | 2,634 | 11,037 | .... | 17,510 | 1,118 | 16,392 |
| | | Alienated .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 695,173 | 5,763 | 44,643 | 50,406 | 5,972 | 14,481 | 7,171 | 1,755 | 6,083 | 19,441 | ..... | 54,903 | 4,497 | 50,406 |
| 3 | Panch Maháls | Rayatwári .. .. .. | 224,766 | .... | 985 | 985 | 99 | 157 | 41 | 327 | 173 | 188 | .... | 985 | .... | 985 |
| | | Other Government .. .. | 12,771 | .... | 24 | 24 | .... | .... | .... | 23 | 1 | .... | .... | 24 | .... | 24 |
| | | Alienated .. .. .. | 13,712 | .... | 26 | 26 | .... | .... | 3 | 22 | 1 | .... | .... | 26 | .... | 26 |
| | | Total ... | 251,249 | ... | 1,035 | 1,035 | 99 | 157 | 44 | 372 | 175 | 188 | ... | 1,035 | ... | 1,035 |
| 4 | Broach ... | Rayatwári .. .. .. | 554,313 | .... | 1,633 | 1,633 | 11 | 709 | 37 | 107 | 607 | 202 | .... | 1,673 | 40 | 1,633 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 554,313 | ... | 1,633 | 1,633 | 11 | 709 | 37 | 107 | 607 | 202 | ..... | 1,673 | 40 | 1,633 |
| 5 | Surat ... | Rayatwári .. .. .. | 475,584 | .... | 12,081 | 12,081 | 88 | 3,419 | 115 | 6,523 | 1,587 | 456 | .... | 12,188 | 107 | 12,081 |
| | | Other Government .. .. | 4,720 | .... | 65 | 65 | .... | .... | .... | 65 | .... | .... | .... | 65 | .... | 65 |
| | | Alienated .. .. .. | 3,729 | .... | 22 | 22 | ..... | .... | .... | 14 | 8 | .... | .... | 22 | .... | 22 |
| | | Total ... | 484,033 | ... | 12,168 | 12,168 | 88 | 3,419 | 115 | 6,602 | 1,595 | 456 | ..... | 12,275 | 107 | 12,168 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh .. | Rayatwári .. .. .. | 2,721,124 | 16,667 | 28,143 | 44,810 | 13,236 | 2,298 | 5,141 | 3,299 | 7,032 | 15,162 | .... | 46,168 | 1,358 | 44,810 |
| | | Other Government .. .. | 62,843 | .... | 55 | 55 | 26 | .... | 1 | 1 | 9 | 18 | .... | 55 | .... | 55 |
| | | Alienated .. .. .. | 109,721 | 387 | 1,179 | 1,566 | 488 | 38 | 60 | 86 | 105 | 894 | .... | 1,671 | 105 | 1,566 |
| | | Total ... | 2,893,688 | 17,054 | 29,377 | 46,431 | 13,750 | 2,336 | 5,202 | 3,386 | 7,146 | 16,074 | ..... | 47,894 | 1,463 | 46,431 |
| 7 | Násik ... | Rayatwári .. .. .. | 1,807,021 | 36,696 | 37,510 | 74,206 | 30,289 | 4,204 | 17,288 | 7,898 | 7,994 | .... | 16,091 | 83,764 | 9,558 | 74,206 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 98,742 | 2,214 | 3,864 | 6,078 | 2,008 | 227 | 678 | 856 | 1,133 | .... | 1,522 | 6,424 | 346 | 6,078 |
| | | Total ... | 1,905,763 | 38,910 | 41,374 | 80,284 | 32,297 | 4,431 | 17,966 | 8,754 | 9,127 | ..... | 17,613 | 90,188 | 9,904 | 80,284 |
| 8 | Ahmanagar... | Rayatwári .. .. .. | 2,281,712 | 3,388 | 83,412 | 86,800 | 28,846 | 528 | 50,157 | 3,197 | 9,276 | 7,014 | 203 | 99,221 | 12,421 | 86,800 |
| | | Other Government .. .. | 165,428 | 84 | 5,550 | 5,634 | 1,995 | 59 | 2,531 | 263 | 890 | 617 | 2 | 6,357 | 723 | 5,634 |
| | | Alienated .. .. .. | 146,416 | .... | 3,997 | 3,997 | 1,053 | 52 | 2,515 | 54 | 483 | 299 | 2 | 4,458 | 461 | 3,997 |
| | | Total ... | 2,593,556 | 3,472 | 92,959 | 96,431 | 31,894 | 639 | 55,203 | 3,514 | 10,649 | 7,930 | 207 | 110,036 | 13,605 | 96,431 |
| 9 | Poona ... | Rayatwári .. .. .. | 1,735,996 | 13,151 | 67,177 | 80,328 | 17,683 | 525 | 35,597 | 3,862 | 36,205 | 3,991 | .... | 97,863 | 17,535 | 80,328 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 303,739 | 944 | 10,499 | 11,443 | 2,820 | 22 | 5,531 | 654 | 3,344 | 814 | .... | 13,185 | 1,742 | 11,443 |
| | | Total ... | 2,039,735 | 14,095 | 77,676 | 91,771 | 20,503 | 547 | 41,128 | 4,516 | 39,549 | 4,805 | ..... | 1,11048 | 19,277 | 91,771 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. .. | 1,951,826 | 3,051 | 72,233 | 75,284 | 30,844 | 1,744 | 35,066 | 2,946 | 14,801 | 10,092 | 1302 | 96,795 | 21,511 | 75,284 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 95,015 | .... | 4,252 | 4,252 | 2,423 | 45 | 2,581 | 111 | 672 | 293 | 121 | 6,246 | 1,994 | 4,252 |
| | | Total ... | 2,046,841 | 3,051 | 76,485 | 79,536 | 33,267 | 1,789 | 37,647 | 3,057 | 15,473 | 10,385 | 1,423 | 103,041 | 23,505 | 79,536 |
| 11 | Sátára ... | Rayatwári .. .. .. | 1,465,536 | 5,363 | 69,199 | 74,562 | 19,945 | 6,357 | 22,421 | 9,298 | 12,122 | 20,956 | .... | 91,009 | 16,537 | 74,562 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 302,780 | 575 | 18,068 | 18,643 | 4,543 | 2,326 | 2,823 | 2,913 | 3,129 | 5,375 | .... | 21,109 | 2,466 | 18,643 |
| | | Total ... | 1,768,316 | 5,938 | 87,267 | 93,205 | 24,488 | 8,683 | 25,244 | 12,211 | 15,251 | 26,331 | .... | 112,208 | 19,003 | 93,205 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. .. | 1,380,987 | 11,736 | 29,481 | 41,217 | 2,101 | 18,896 | 5,263 | 6,133 | 5,198 | 5,351 | .... | 42,942 | 1,725 | 41,217 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 311,667 | 1,390 | 7,101 | 8,491 | 762 | 562 | 2,175 | 2,157 | 1,567 | 1,824 | .... | 9,047 | 556 | 8,491 |
| | | Total ... | 1,692,654 | 13,126 | 36,582 | 49,708 | 2,863 | 19,458 | 7,438 | 8,290 | 6,765 | 7,175 | .... | 51,989 | 2,281 | 49,708 |
| 13 | Bijápur ... | Rayatwári .. .. .. | 2,337,244 | 51 | 10,142 | 10,193 | 3,272 | 1,500 | 745 | 1,234 | 3,719 | 1,360 | 71 | 11,901 | 1,708 | 10,193 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 259,460 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 2,596,704 | 51 | 10,142 | 10,193 | 3,272 | 1,500 | 745 | 1,234 | 3,719 | 1,360 | 71 | 11,901 | 1,708 | 10,193 |
| 14 | Dhárwár ... | Rayatwári .. .. .. | 1,925,238 | 5,174 | 61,547 | 66,721 | 76 | 57,511 | 391 | 3,639 | 4,424 | 1,085 | .... | 67,126 | 405 | 66,721 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 106,309 | 188 | 7,956 | 8,144 | .... | 7,272 | 89 | 383 | 305 | 147 | .... | 8,196 | 52 | 8,144 |
| | | Total ... | 2,031,547 | 5,362 | 69,503 | 74,865 | 76 | 64,783 | 480 | 4,022 | 4,729 | 1,232 | .... | 75,322 | 457 | 74,865 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. .. | 508,732 | .... | 4,780 | 4,780 | .... | .... | .... | 1,537 | 3,243 | .... | .... | 4,780 | .... | 4,780 |
| | | Other Government .. .. | 740 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 7,503 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 516,975 | .... | 4,780 | 4,780 | .... | .... | .... | 1,537 | 3,243 | .... | .... | 4,780 | .... | 4,780 |
| 16 | Kolába ... | Rayatwári .. .. .. | 175,660 | No irrigation. | | | | | | | | | | | | |
| | | Other Government .. .. | 182,669 | | | | | | | | | | | | | |
| | | Alienated .. .. .. | 1,169 | | | | | | | | | | | | | |
| | | Total ... | 359,498 | | | | | | | | | | | | | |
| 17 | Ratnágiri ... | Rayatwári .. .. .. | Not available. | | | | | | | | | | | | | |
| | | Other Government .. .. | | | | | | | | | | | | | | |
| | | Alienated .. .. .. | | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | | |
| 18 | Kánara ... | Rayatwári .. .. .. | 208,335 | 33,299 | 175,036 | 208,335 | .... | 174,212 | 13,709 | 3,262 | 18,163 | 9,453 | .... | 218,799 | 10,464 | 208,335 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total .. | 208,335 | 33,299 | 175,036 | 208,335 | .... | 174,212 | 13,709 | 3,262 | 18,163 | 9,453 | .... | 218,799 | 10,464 | 208,335 |
| | Total A. | Rayatwári .. .. .. | 20,974,490 | 1,38,511 | 732,652 | 871,163 | 165,912 | 305,632 | 204,466 | 56,198 | 132,605 | 85,991 | 17,667 | 968,471 | 97,308 | 871,163 |
| | | Other Government .. .. | 1,166,337 | 189 | 35,035 | 35,224 | 7,938 | 5,993 | 5,693 | 1,515 | 4,079 | 11,845 | 2 | 37,065 | 1,841 | 35,224 |
| | | Alienated .. .. .. | 1,813,921 | 6,038 | 61,596 | 67,634 | 15,615 | 12,785 | 17,358 | 7,428 | 10,849 | 9,676 | 1,645 | 75,356 | 7,722 | 67,634 |
| | | Total .. | 23,954,748 | 1,44,738 | 829,283 | 974,021 | 189,465 | 324,410 | 227,517 | 65,141 | 147,533 | 107,512 | 19,314 | 1,080,892 | 106,871 | 974,021 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 216,117 | 170,428 | 42,913 | 213,341 | 36,367 | 94,666 | 64,220 | 450 | 2,428 | 26,450 | ... | 224,581 | 11,240 | 213,341 |
| 20 | Haidarabad ... ... ... ... | | 491,983 | 457,186 | 34,388 | 491,574 | 28,150 | 38,716 | 294,869 | 537 | 11,573 | 121,204 | ... | 495,049 | 3,475 | 491,574 |
| 21 | Shikárpur ... ... ... ... | | 624,535 | 480,522 | 144,013 | 624,535 | 148,304 | 279,841 | 239,340 | 706 | 16,448 | 65,849 | ... | 750,488 | 125,953 | 624,535 |
| 22 | Upper Sind Frontier ... ... ... | | 137,149 | 129,874 | 7,275 | 137,149 | 9,781 | 9,184 | 72,069 | 15 | 694 | 53,569 | ... | 145,312 | 8,163 | 137,149 |
| 23 | Thar and Párkar ... ... ... | | Not available. | | | | | | | | | | | | | |
| | | Total B ... | 1,469,784 | 12,38,010 | 228,589 | 1,466,599 | 222,602 | 422,407 | 670,498 | 1,708 | 31,143 | 267,072 | ..... | 1,615,430 | 148,831 | 1,466,599 |
| | | Grand Total ... | 25,424,532 | 13,82,748 | 1,057,872 | 2,440,620 | 412,067 | 746,817 | 898,015 | 66,849 | 178,676 | 374,584 | 19,314 | 2,696,322 | 255,702 | 2,440,620 |

# V.—Agricultural Stock, 1885-86.

| No. | District. | | Cattle and Other Quadrupeds. | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bullocks. | Cows. | Buffaloes. | | Horses. | Mares. | Colts. | Asses. | Sheep and Goats. | With two Bullocks. | With four Bullocks. | Riding Carts. | Carts used in carrying loads. |
| | | | | | Females. | Males. | | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. | 93,677 | 54,919 | 69,843 | 13,654 | 1,394 | 1,604 | 423 | 5,414 | 37,824 | 39,091 | 82 | 921 | 12,554 |
| | | Other Government . | 56,537 | 35,845 | 29,273 | 6,934 | 946 | 1,291 | 340 | 2,810 | 32,037 | 24,854 | 118 | 537 | 8,733 |
| | | Alienated .. .. | 9,176 | 5,221 | 6,272 | 2,061 | 208 | 151 | 70 | 537 | 5,749 | 3,993 | 54 | 53 | 1,408 |
| | | Total ... | 159,390 | 95,985 | 105,388 | 22,649 | 2,548 | 3,046 | 833 | 8,761 | 75,610 | 67,938 | 254 | 1,511 | 22,695 |
| 2 | Kaira ... ... | Rayatwári .. .. | 118,611 | 46,625 | 111,103 | 3,636 | 490 | 892 | 307 | 3,834 | 32,606 | 48,891 | .... | 618 | 18,961 |
| | | Other Government . | 39,133 | 7,556 | 58,860 | 2,794 | 244 | 316 | 100 | 1,632 | 13,946 | 13,755 | .... | 598 | 9,182 |
| | | Alienated .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 157,744 | 54,181 | 169,963 | 6,430 | 734 | 1,208 | 407 | 5,466 | 46,552 | 62,646 | ..... | 1,216 | 28,143 |
| 3 | Panch Maháls ... | Rayatwári .. .. | 68,184 | 67,718 | 21,600 | 2,898 | 944 | 922 | 317 | 1,141 | 16,864 | 26,696 | .... | 206 | 5,991 |
| | | Other Government . | 4,332 | 5,987 | 932 | 265 | 35 | 44 | 16 | 68 | 1,371 | 1,703 | .... | 31 | 628 |
| | | Alienated .. .. | 3,134 | 3,460 | 889 | 147 | 17 | 20 | 10 | 24 | 755 | 1,416 | .... | 2 | 468 |
| | | Total ... | 75,650 | 77,165 | 23,421 | 3,310 | 996 | 986 | 343 | 1,233 | 18,990 | 29,815 | ..... | 239 | 7,087 |
| 4 | Broach ... ... | Rayatwári .. .. | 67,731 | 13,524 | 42,722 | 6,610 | 881 | 1,027 | 494 | 1,074 | 28,557 | 28,746 | .... | 2,873 | 16,794 |
| | | Other Government . | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 67,731 | 13,524 | 42,722 | 6,610 | 881 | 1,027 | 494 | 1,074 | 28,557 | 28,746 | ..... | 2,873 | 16,794 |
| 5 | Surat ... ... | Rayatwári .. .. | 145,492 | 99,436 | 68,034 | 9,667 | 458 | 387 | 147 | 124 | 88,745 | 48,672 | 1,170 | 8,126 | 27,483 |
| | | Other Government . | 1,252 | 1,097 | 486 | 110 | 1 | .... | .... | .... | 242 | 420 | 9 | 65 | 238 |
| | | Alienated .. .. | 908 | 510 | 406 | 42 | 4 | 2 | 2 | .... | 28 | 305 | .... | 62 | 228 |
| | | Total ... | 147,652 | 101,043 | 68,926 | 9,819 | 463 | 389 | 149 | 124 | 89,015 | 49,397 | 1,179 | 8,253 | 27,949 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. | 350,567 | 250,996 | 117,655 | 16,291 | 7,385 | 6,084 | 3,214 | 8,102 | 174,697 | 85,448 | 17,644 | 28,268 | 51,899 |
| | | Other Government . | 14,607 | 13,593 | 2,237 | 420 | 163 | 136 | 48 | 67 | 2,113 | 5,621 | 63 | 157 | 1,722 |
| | | Alienated .. .. | 20,935 | 13,467 | 5,585 | 726 | 411 | 369 | 170 | 644 | 8,115 | 4,827 | 1,382 | 1,250 | 2,453 |
| | | Total .. | 386,109 | 278,056 | 125,477 | 17,437 | 7,959 | 6,589 | 3,432 | 8,813 | 184,925 | 95,896 | 19,089 | 29,675 | 56,074 |
| 7 | Násik ... ... | Rayatwári .. .. | 202,370 | 189,771 | 33,583 | 25,101 | 5,554 | 4,356 | 2,195 | 3,199 | 216,918 | 43,313 | 22,370 | 13,278 | 14,207 |
| | | Other Government . | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. | 12,477 | 7,304 | 1,719 | 1,391 | 307 | 244 | 103 | 267 | 11,570 | 2,277 | 1,743 | 885 | 914 |
| | | Total ... | 214,847 | 197,075 | 35,302 | 26,492 | 5,861 | 4,600 | 2,298 | 3,466 | 228,488 | 45,590 | 24,113 | 14,163 | 15,121 |
| 8 | Ahmadnagar ... | Rayatwári .. .. | 258,177 | 189,524 | 34,793 | 11,736 | 6,951 | 8,073 | 3,542 | 6,692 | 384,131 | 23,561 | 37,935 | 10,627 | 14,451 |
| | | Other Government . | 17,872 | 11,686 | 2,086 | 558 | 386 | 639 | 276 | 501 | 35,403 | 1,477 | 3,030 | 325 | 928 |
| | | Alienated .. .. | 13,645 | 10,275 | 1,436 | 270 | 401 | 467 | 231 | 465 | 22,396 | 1,659 | 2,107 | 620 | 768 |
| | | Total ... | 287,694 | 211,485 | 38,315 | 12,564 | 7,738 | 9,179 | 4,049 | 7,658 | 441,930 | 26,697 | 43,072 | 11,572 | 16,147 |
| 9 | Poona ... ... | Rayatwári .. .. | 214,519 | 135,623 | 39,021 | 11,002 | 4,179 | 4,468 | 1,656 | 5,562 | 295,557 | 23,922 | 23,034 | 2,763 | 15,165 |
| | | Other Government . | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. | 50,425 | 29,627 | 7,946 | 2,116 | 939 | 864 | 338 | 939 | 36,042 | 4,128 | 5,600 | 388 | 4,479 |
| | | Total ... | 264,944 | 165,250 | 46,967 | 13,118 | 5,118 | 5,332 | 1,994 | 6,501 | 331,599 | 28,050 | 28,634 | 3,151 | 19,644 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 188,389 | 116,214 | 39,659 | 18,626 | 3,795 | 4,622 | 1,869 | 3,827 | 305,300 | 6,025 | 14,913 | 876 | 10,613 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 9,438 | 6,199 | 1,637 | 885 | 146 | 287 | 114 | 126 | 20,957 | 248 | 809 | 26 | 385 |
| | | Total | 197,827 | 122,413 | 41,296 | 19,511 | 3,941 | 4,909 | 1,983 | 3,953 | 326,257 | 6,273 | 15,722 | 902 | 10,998 |
| 11 | Sátára | Rayatwári | 206,510 | 130,335 | 70,429 | 24,664 | 5,768 | 4,470 | 1,669 | 3,423 | 353,172 | 19,089 | 20,028 | 1,309 | 16,519 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 45,246 | 29,459 | 16,536 | 6,342 | 815 | 792 | 266 | 505 | 60,046 | 4,597 | 5,411 | 287 | 3,652 |
| | | Total | 251,756 | 159,794 | 86,965 | 31,006 | 6,583 | 5,262 | 1,935 | 3,928 | 413,218 | 23,686 | 25,439 | 1,596 | 20,171 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 166,734 | 112,003 | 78,584 | 42,485 | 2,028 | 2,282 | 796 | 2,681 | 221,858 | 41,840 | 9,527 | 282 | 22,305 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 37,035 | 24,264 | 17,490 | 8,061 | 526 | 645 | 232 | 770 | 62,680 | 6,826 | 2,401 | 71 | 3,533 |
| | | Total | 203,769 | 136,267 | 96,074 | 50,546 | 2,554 | 2,927 | 1,028 | 3,451 | 284,538 | 48,666 | 11,928 | 353 | 25,838 |
| 13 | Bijápur | Rayatwári | 191,413 | 120,714 | 67,393 | 20,975 | 2,613 | 3,794 | 1,643 | 4,782 | 304,846 | 33,358 | 10,108 | 513 | 8,827 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 24,369 | 15,382 | 8,814 | 2,665 | 265 | 376 | 174 | 599 | 43,697 | 4,846 | 990 | 42 | 967 |
| | | Total | 215,782 | 136,096 | 76,207 | 23,640 | 2,878 | 4,170 | 1,817 | 5,381 | 348,543 | 38,204 | 11,098 | 555 | 9,794 |
| 14 | Dhárwár | Rayatwári | 251,613 | 147,095 | 92,514 | 37,081 | 2,133 | 1,773 | 846 | 5,418 | 189,639 | 76,351 | 7,192 | 653 | 40,298 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 21,168 | 12,695 | 6,346 | 4,170 | 163 | 148 | 84 | 289 | 8,119 | 6,888 | 730 | 34 | 2,238 |
| | | Total | 272,781 | 159,790 | 98,860 | 41,251 | 2,296 | 1,921 | 930 | 5,707 | 197,758 | 83,239 | 7,922 | 687 | 42,536 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 128,110 | 112,105 | 24,807 | 43,118 | 731 | 252 | 100 | 33 | 35,347 | 76,982 | .... | 4,126 | 21,477 |
| | | Other Government | 620 | 666 | 72 | 270 | 5 | .... | .... | .... | 252 | 390 | .... | 9 | 33 |
| | | Alienated | 4,141 | 2,387 | 514 | 1,355 | 147 | 17 | .... | 1 | 788 | 1,681 | .... | 122 | 1,088 |
| | | Total | 132,871 | 115,158 | 25,393 | 44,743 | 883 | 269 | 100 | 34 | 36,387 | 79,053 | ... | 4,257 | 22,598 |
| 16 | Kolába | Rayatwári | 38,113 | 32,438 | 18,660 | 12,203 | 305 | 80 | 30 | 53 | 9,649 | 23,111 | .... | 878 | 3,956 |
| | | Other Government | 26,817 | 22,018 | 11,172 | 6,665 | 88 | 18 | 5 | .... | 10,202 | 14,683 | .... | 73 | 506 |
| | | Alienated | 275 | 240 | 233 | 63 | 1 | 1 | .... | .... | 43 | 265 | .... | 4 | 7 |
| | | Total | 65,205 | 54,696 | 30,065 | 18,931 | 394 | 99 | 35 | 53 | 19,894 | 38,059 | ... | 955 | 4,469 |
| 17 | Ratnágiri | Rayatwári | Not available. | | | | | | | | | | | | |
| | | Other Government | | | | | | | | | | | | | |
| | | Alienated | | | | | | | | | | | | | |
| | | Total | | | | | | | | | | | | | |
| 18 | Kánara | Rayatwári | 88,215 | 84,951 | 25,554 | 28,079 | 214 | 144 | 47 | 224 | 4,792 | 39,440 | 3 | 81 | 4,940 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | ..... |
| | | Alienated | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | ..... |
| | | Total | 88,215 | 84,951 | 25,554 | 28,079 | 214 | 144 | 47 | 224 | 4,792 | 39,440 | 3 | 81 | 4,940 |
| | Total A. | Rayatwári | 2,776,425 | 1,903,991 | 955,954 | 327,826 | 45,823 | 45,230 | 19,295 | 55,583 | 2,700,502 | 684,536 | 164,006 | 76,398 | 306,440 |
| | | Other Government | 161,170 | 98,448 | 105,118 | 18,016 | 1,868 | 2,444 | 785 | 5,078 | 95,566 | 62,903 | 3,220 | 1,795 | 21,970 |
| | | Alienated | 252,372 | 160,490 | 75,823 | 30,294 | 4,350 | 4,383 | 1,794 | 5,166 | 280,985 | 43,956 | 21,227 | 3,846 | 22,588 |
| | | Total | 3,189,967 | 2,162,929 | 1,136,895 | 376,136 | 52,041 | 52,057 | 21,874 | 65,827 | 3,077,053 | 791,395 | 188,453 | 82,039 | 350,998 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi | | Not available. | | | | | | | | | | | | |
| 20 | Haidarabad | | | | | | | | | | | | | | |
| 21 | Shikárpur | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier | | | | | | | | | | | | | | |
| 23 | Thar and Párkar | | | | | | | | | | | | | | |
| | | Total B. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Grand Total | 3,189,967 | 2,162,929 | 1,136,895 | 376,136 | 52,041 | 52,057 | 21,874 | 65,827 | 3,077,053 | 791,395 | 188,453 | 82,039 | 350,998 |

# STATISTICS.

## B.—RAINFALL.

# STATISTICS.

## B.—RAINFALL.

### Khándesh District Rainfall of 1885.

| Rain Periods. | Dhulia. | | Pimpalner (Pa'nkhed). | | Cha'lisgaon. | | Pa'chora. | | Jalgaon. | | Ja'mner (La'khol). | | Bhusa'val (Varangaon). | | Sa'vda (Ra'ver). | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | |
| arly Rains ... .. ... (1st January to 10th April) | 0·09 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| nte-Monsoon ... ... ... | 0·53 | 2 | 0·40 | 2 | ... | ... | 0·27 | 1 | ... | ... | 0·27 | 1 | ... | ... | ... | ... |
| 11th April to 4th June .. Ashvini .. | 0·18 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Bharni .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kritika .. | .. | .. | 0·37 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Rohini .. | 0·35 | 1 | 0·03 | 1 | .. | .. | 0·27 | 1 | .. | .. | 0·27 | 1 | .. | .. | .. | .. |
| Monsoon—Kharíf ... ... | 4·91 | 22 | 10·59 | 39 | 11·20 | 19 | 8·97 | 18 | 10·41 | 32 | 27·16 | 18 | 8·70 | 16 | 12·58 | 28 |
| 5th June to 14th August .. Mrig .. | 0·43 | 3 | 0·84 | 6 | 1·61 | 5 | 1·55 | 2 | 1·69 | 5 | 0·64 | 4 | 1·90 | 3 | 2·36 | 4 |
| A'rdra .. | 0·08 | 1 | 0·08 | 2 | 0·32 | 1 | .. | .. | .. | .. | 0·42 | 3 | .. | .. | 1·45 | 5 |
| Punarvasu .. | 1·47 | 5 | 3·32 | 7 | 4·74 | 5 | 2·12 | 4 | 1·84 | 5 | 6·55 | 3 | 2·10 | 5 | 5·83 | 6 |
| Pushya .. | 1·52 | 7 | 3·91 | 12 | 0·35 | 3 | 2·00 | 6 | 5·24 | 12 | 15·39 | 4 | 2·60 | 4 | 1·07 | 6 |
| A'shlesha .. | 1·41 | 6 | 2·44 | 12 | 4·18 | 5 | 3·30 | 6 | 1·64 | 10 | 4·16 | 4 | 2·10 | 4 | 1·87 | 7 |
| Monsoon—Rabi ... ... ... | 14·42 | 21 | 7·75 | 27 | 8·69 | 17 | 10·98 | 14 | 9·34 | 22 | 10·38 | 15 | 8·60 | 12 | 6·44 | 14 |
| 15th August to 21st October .. Magha .. | 3·36 | 6 | 3·40 | 13 | 0·41 | 3 | 1·24 | 4 | 4·32 | 8 | 5·95 | 4 | 3·10 | 6 | 1·47 | 4 |
| Purva .. | 0·68 | 3 | 0·20 | 4 | 1·20 | 3 | 0·20 | 1 | 0·40 | 3 | 1·26 | 3 | .. | .. | 0·40 | 1 |
| Uttara .. | 2·95 | 6 | 0·75 | 3 | 4·37 | 6 | 6·26 | 5 | 2·43 | 7 | 0·52 | 3 | 3·10 | 3 | 2·42 | 6 |
| Hast .. | 6·87 | 4 | 2·54 | 5 | 2·28 | 3 | 3·06 | 3 | 1·99 | 3 | 1·55 | 3 | 1·80 | 2 | 2·15 | 3 |
| Chitra .. | 0·56 | 2 | 0·86 | 2 | 0·43 | 2 | 0·22 | 1 | 0·20 | 1 | 1·10 | 2 | 0·60 | 1 | .. | .. |
| Late Rains ... ... ... | 1·38 | 3 | 1·00 | 2 | 0·79 | 3 | 1·75 | 2 | 3·48 | 4 | 1·25 | 2 | 0·35 | 1 | 2·17 | 6 |
| 22nd October to 30th November . Svátí .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Vishákha .. | 0·54 | 1 | 1·00 | 2 | 0·48 | 2 | 1·65 | 1 | 0·65 | 1 | 1·25 | 2 | 0·35 | 1 | 0·30 | 1 |
| Anurádha .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| December .. .. .. .. | 1·04 | 2 | .. | .. | 0·31 | 1 | 0·10 | 1 | 2·83 | 3 | .. | .. | .. | .. | 1·87 | 5 |
| Total ... | 21·33 | 49 | 19·74 | 70 | 20·68 | 39 | 21·97 | 35 | 23·23 | 58 | 39·06 | 36 | 17·65 | 29 | 21·19 | 48 |
| Approximate average ... | 23·16 | ... | 25·41 | ... | 24·59 | ... | 28·99 | ... | 30·72 | ... | 29·35 | ... | 26·11 | ... | 23·41 | ... |

*General Characteristics.*—In the north and west or the Dáng tracts of the Sátpudás and Sahyádris the fall is heavy and sure. The fall of the cotton and wheat tracts is uncertain.

*Remarks.*—Records available for 8 out of 16 tálukás, and these are, except Pimpalner, the chief cotton tracts. The extensive wheat tracts of the Tápti valley as well as the Dáng tracts, except Pimpalner, are unrepresented.

The monsoon rain was very late. Sowing was not possible till the middle of July. Cotton was most affected. The heavy rain, which then came, was followed by a prolonged break. The jowári crop was good, and bájri, though late, was very fair. Uttara rain (11th—24th September) was decidedly good, and Hast, the next rain period of 14 days, was also good, but strangely capricious and unevenly distributed. The rabi season was early and good, but would have been better without the December rain. As a whole the season (except for cotton) was fair in the east, south and centre—the rabi tracts. But the kharíf harvest of the west was poor. All over the district, scarcity of fodder till end of September was much felt. Such assistance as was possible was afforded by the opening of forests to grazing.

## Násik District Rainfall of 1885.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Nipha'd. | | Yeola. | | Na'ndgaon. | | Ma'legaon. | | Kalvan (Otur). | | Cha'ndor. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... (1st January to 10th April) | 0·05 | 1 | ... | ... | 0·07 | 2 | ... | ... | 0·10 | 1 | ... | ... | 0·07 | 1 | ... | ... | ... | ... | ... | ... | 0·05 | 1 |
| Ante-Monsoon ... ... | 0·23 | 3 | 0·31 | 3 | 2·27 | 9 | 0·11 | 2 | 1·70 | 8 | ... | ... | 0·54 | 5 | ... | ... | 0·41 | 3 | 0·02 | 1 | 1·04 | 1 |
| 11th April to 4th June. Ashvini ... | 0·07 | 1 | ... | ... | 0·24 | 3 | 0·01 | 1 | 0·09 | 3 | ... | ... | 0·05 | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Bharni ... | ... | ... | ... | ... | 0·03 | 1 | ... | ... | 0·02 | 1 | ... | ... | 0·03 | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Kritika ... | ... | ... | ... | ... | 1·64 | 1 | ... | ... | 0·11 | 1 | ... | ... | 0·35 | 1 | ... | ... | 0·20 | 1 | ... | ... | ... | ... |
| Rohini ... | 0·16 | 2 | 0·31 | 3 | 0·36 | 4 | 0·10 | 1 | 1·48 | 3 | ... | ... | 0·11 | 2 | ... | ... | 0·21 | 2 | 0·02 | 1 | 1·04 | 1 |
| Monsoon—Kharíf ... | 12·15 | 46 | 73·05 | 67 | 7·29 | 37 | 5·32 | 26 | 2·05 | 18 | 7·12 | 24 | 4·68 | 18 | 9·22 | 34 | 9·96 | 25 | 10·60 | 39 | 60·94 | 60 |
| 5th June to 14th August. Mrig ... | 0·72 | 6 | 3·96 | 11 | 0·16 | 2 | 0·71 | 1 | 0·29 | 2 | 2·45 | 7 | 0·59 | 4 | 1·74 | 5 | 1·09 | 3 | 1·01 | 3 | 5·93 | 7 |
| A'rdra ... | 0·55 | 9 | 5·20 | 14 | 0·15 | 4 | 0·13 | 2 | ... | ... | 0·26 | 2 | ... | ... | 0·19 | 3 | 0·10 | 1 | 0·28 | 6 | 4·51 | 13 |
| Punarvasu... | 6·96 | 5 | 23·05 | 14 | 2·84 | 6 | 1·38 | 4 | 0·29 | 4 | 1·82 | 4 | 0·87 | 6 | 2·46 | 7 | 1·74 | 3 | 4·37 | 6 | 26·52 | 12 |
| Pushya ... | 2·47 | 13 | 24·86 | 14 | 1·73 | 13 | 1·54 | 8 | 1·08 | 7 | 1·04 | 4 | 0·70 | 4 | 1·76 | 9 | 2·31 | 9 | 3·36 | 12 | 15·06 | 14 |
| A'shlesha ... | 1·45 | 13 | 15·98 | 14 | 2·41 | 12 | 1·56 | 11 | 0·39 | 5 | 1·55 | 7 | 2·52 | 4 | 3·07 | 10 | 4·72 | 9 | 1·58 | 12 | 8·92 | 14 |
| Monsoon—Rabi ... | 20·07 | 42 | 49·19 | 54 | 20·80 | 36 | 11·67 | 32 | 13·97 | 25 | 15·55 | 29 | 12·31 | 20 | 11·43 | 30 | 12·97 | 29 | 15·00 | 29 | 29·63 | 42 |
| 15th August to 21st October. Magha ... | 9·49 | 13 | 31·60 | 13 | 5·36 | 13 | 2·65 | 12 | 4·05 | 8 | 2·01 | 6 | 1·41 | 5 | 3·44 | 12 | 3·66 | 11 | 4·89 | 11 | 18·48 | 13 |
| Purva ... | 0·58 | 8 | 6·27 | 14 | 0·18 | 2 | 0·77 | 5 | 0·10 | 1 | 0·77 | 5 | 1·31 | 3 | 0·35 | 3 | 0·29 | 3 | 0·31 | 5 | 3·44 | 13 |
| Uttara ... | 4·23 | 9 | 5·61 | 13 | 10·14 | 13 | 5·17 | 8 | 6·76 | 9 | 8·45 | 9 | 2·70 | 4 | 4·36 | 6 | 3·65 | 7 | 3·74 | 6 | 2·19 | 6 |
| Hast ... | 3·97 | 7 | 4·75 | 9 | 5·00 | 6 | 2·90 | 6 | 3·05 | 6 | 4·06 | 5 | 6·51 | 5 | 2·88 | 7 | 4·68 | 5 | 3·41 | 5 | 2·21 | 6 |
| Chitra... ... | 1·80 | 5 | 0·96 | 5 | 0·12 | 2 | 0·18 | 1 | 0·01 | 1 | 0·26 | 4 | 0·38 | 3 | 0·40 | 2 | 0·69 | 3 | 2·15 | 2 | 3·31 | 4 |
| Late Rains ... ... | 0·40 | 4 | 0·58 | 2 | 0·76 | 5 | 1·23 | 3 | 1·83 | 3 | 3·87 | 4 | 1·34 | 4 | 0·66 | 1 | 3·24 | 6 | 0·46 | 3 | 0·58 | 1 |
| 22nd October to 30th November. Sváti ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vishákha ... | 0·40 | 4 | 0·58 | 2 | 0·67 | 4 | 1·02 | 2 | 0·36 | 1 | 2·00 | 3 | 1·07 | 3 | 0·66 | 1 | 3·07 | 5 | 0·46 | 3 | 0·58 | 1 |
| Anurádha ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| December ... ... ... | ... | ... | ... | ... | 0·09 | 1 | 0·21 | 1 | 1·47 | 2 | 1·87 | 1 | 0·27 | 1 | ... | ... | 0·17 | 1 | ... | ... | ... | ... |
| Total ... | 32·90 | 96 | 123·13 | 126 | 31·19 | 89 | 18·33 | 63 | 19·65 | 55 | 26·54 | 57 | 18·94 | 48 | 21·31 | 65 | 26·58 | 63 | 26·08 | 72 | 92·24 | 105 |
| Approximate average... | 27 | ... | 114 | ... | 21 | ... | 18 | ... | 22 | ... | 21 | ... | 23 | ... | 32 | ... | 28 | ... | 26 | ... | 93 | ... |

*General Characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—No record available for Báglán táluka. Monsoon very late, though in the rice tracts there was some rain in June. The rain in Magha came very opportunely to enable the early sowings to be made. The Uttara and Hast rains gave a favourable rabi. The late rains were also favourable where the rabi fall was deficient. The scarcity of fodder, which lasted till October, was partly relieved by the issue of orders to allow free grazing on all waste land of which the right to graze is ordinarily sold by auction. On the whole the kharíf season was fair, though late. Cotton was sown in small area. The rabi harvest was good.

## Ahmadnagar District Rainfall of 1885.

| Rain Periods. | Nagar. | | Sangamner. | | Ja'mkhed. | | Pa'rner. | | Kopargaon. | | Ra'huri. | | Neva'sa. | | Shevgaon. | | Karjat. | | Shrigonda. | | Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... (1st January to 10th April) | 0·31 | 2 | ... | ... | ... | ... | 0·48 | 1 | ... | ... | 0·10 | 1 | 0·10 | 1 | 0·11 | 2 | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... .. | 1·17 | 9 | 3·05 | 10 | 1·37 | 6 | 0·72 | 4 | 0·59 | 2 | 0·65 | 1 | 1·80 | 4 | 1·78 | 8 | 2·10 | 8 | 0·95 | 7 | 0·53 | 3 |
| 11th April to 4th June. Ashvini .. | 0·12 | 3 | 0·32 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 0·70 | 1 | 0·37 | 2 | 0·65 | 3 | .. | .. | 0·24 | 2 |
| Bharni .. | .. | .. | 0·05 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·50 | 1 | .. | .. | 0·05 | 1 | .. | .. |
| Kritika .. | 0·03 | 1 | 1·03 | 3 | 0·52 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 0·49 | 2 | 0·34 | 1 | 0·47 | 1 | .. | .. |
| Rohini .. | 1·02 | 5 | 1·65 | 4 | 0·85 | 5 | 0·72 | 4 | 0·59 | 2 | 0·65 | 1 | 1·10 | 3 | 0·42 | 3 | 1·11 | 4 | 0·43 | 5 | 0·29 | 1 |
| Monsoon—Kharíf ... ... | 4·78 | 25 | 3·70 | 23 | 7·84 | 25 | 4·09 | 14 | 2·12 | 9 | 4·37 | 12 | 5·65 | 27 | 11·20 | 21 | 3·78 | 16 | 2·87 | 15 | 5·05 | 24 |
| 5th June to 14th August. Mrig .. | 0·85 | 7 | 0·74 | 5 | 2·00 | 6 | 0·62 | 3 | 0·15 | 2 | 1·79 | 4 | 1·96 | 7 | 1·06 | 5 | 0·67 | 3 | 0·49 | 4 | 0·44 | 1 |
| A'rdra .. | 0·61 | 4 | .. | .. | 0·23 | 3 | 0·37 | 1 | .. | .. | 0·10 | 1 | 0·53 | 3 | 0·56 | 1 | 0·12 | 1 | 0·11 | 1 | .. | .. |
| Punarvasu .. | 2·69 | 6 | 0·95 | 4 | 2·67 | 6 | 1·20 | 2 | 1·27 | 3 | 1·18 | 4 | 1·82 | 7 | 5·03 | 8 | 1·38 | 5 | 0·70 | 4 | 1·26 | 4 |
| Pushya .. | 0·47 | 5 | 1·22 | 9 | 1·11 | 6 | 1·18 | 5 | 0·34 | 2 | 0·17 | 1 | 1·04 | 6 | 1·99 | 4 | 0·74 | 3 | 0·33 | 4 | 2·36 | 8 |
| A'shlesha .. | 0·16 | 3 | 0·79 | 5 | 1·83 | 4 | 0·72 | 3 | 0·36 | 2 | 1·13 | 2 | 0·30 | 4 | 2·56 | 3 | 0·87 | 4 | 1·24 | 2 | 0·99 | 11 |
| Monsoon—Rabi ... ... | 12·79 | 30 | 14·70 | 31 | 18·54 | 28 | 12·32 | 27 | 15·01 | 20 | 16·84 | 24 | 12·32 | 24 | 14·72 | 26 | 15·86 | 26 | 21·61 | 29 | 17·03 | 31 |
| 15th August to 21st October. Magha .. | 0·91 | 7 | 2·94 | 10 | 1·27 | 2 | 1·51 | 7 | 3·60 | 4 | 1·85 | 3 | 0·83 | 5 | 0·30 | 3 | 0·97 | 2 | 1·63 | 3 | 5·95 | 11 |
| Purva .. | .. | .. | .. | .. | 2·45 | 4 | 0·03 | 1 | 0·72 | 2 | 0·53 | 2 | 0·35 | 2 | 0·49 | 1 | .. | .. | 0·13 | 1 | 0·12 | 3 |
| Uttara .. | 7·63 | 9 | 6·17 | 11 | 6·67 | 12 | 6·62 | 11 | 7·41 | 8 | 7·35 | 9 | 6·39 | 11 | 6·79 | 12 | 6·39 | 11 | 14·12 | 11 | 8·61 | 10 |
| Hast .. | 2·86 | 9 | 3·23 | 7 | 5·99 | 7 | 4·06 | 7 | 2·87 | 4 | 5·61 | 5 | 2·50 | 5 | 1·93 | 6 | 5·64 | 10 | 3·99 | 11 | 2·28 | 5 |
| Chitra .. | 1·39 | 5 | 2·36 | 3 | 2·16 | 3 | 0·10 | 1 | 0·41 | 2 | 1·50 | 5 | 2·25 | 1 | 5·21 | 4 | 2·86 | 3 | 1·74 | 3 | 0·07 | 2 |
| Late Rains ... ... ... | 1·47 | 8 | 1·94 | 6 | 1·11 | 4 | 0·71 | 2 | 1·18 | 2 | 2·42 | 4 | 1·20 | 5 | 0·85 | 6 | 1·74 | 6 | 1·60 | 7 | 0·76 | 3 |
| 22nd October to 30th November. Swáti .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Vishákha .. | 1·06 | 5 | 0·88 | 4 | 0·76 | 2 | 0·71 | 2 | 0·28 | 1 | 1·85 | 2 | 0·55 | 3 | 0·17 | 2 | 0·80 | 2 | 0·55 | 3 | 0·59 | 2 |
| Anurádha.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| December .. .. .. | 0·41 | 3 | 1·06 | 2 | 0·35 | 2 | .. | .. | 0·90 | 1 | 0·57 | 2 | 0·65 | 2 | 0·68 | 4 | 0·94 | 4 | 1·05 | 4 | 0·17 | 1 |
| Total ... | 20·52 | 74 | 23·39 | 70 | 28·86 | 63 | 18·32 | 48 | 18·90 | 33 | 24·38 | 42 | 21·07 | 61 | 28·66 | 63 | 23·48 | 56 | 27·03 | 58 | 23·37 | 61 |
| Approximate average ... | 23 | ... | 17 | ... | 26 | ... | 21 | ... | 18 | ... | 26 | ... | 21 | ... | 23 | ... | 20 | ... | 20 | ... | 21 | ... |

*General Characteristics.*—(*1*) *Desh*—Godávari valley (tálukás 5 to 8). Rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukás 9 and 10) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukás 1 to 4 lie between these valleys. Alternation of bare hill and treeless plain, with occasional fertile well-wooded tracts. Rain more regular.

(*2*) *Dángs.*—Half Akola has very heavy rain. Half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—The ante-monsoon fall was useful for preparing the land. The kharíf rain came fairly early, but was not full till the middle of July, and sowings were not completed till August. Rabi rain was timely, but the sowings were delayed by its continuance. In Kopargaon, Párner and Shrígonda there was great scarcity of fodder till October. The area under kharíf was smaller than usual. Both kharíf and rabi were thus late, and the December rain therefore did good, and was not too heavy. On the whole the season was better than that of the previous year.

## Poona District Rainfall of 1885.

| Rain Periods. | | Haveli. | | Ma'val (Lona'vla). | | Khed. | | Junnar. | | Sirur. | | Purandhar. | | Bhimthadi (Supa). | | Inda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | |
| Early Rains ... ... ... (1st January to 10th April) | | 0·08 | 1 | 0·11 | 1 | 0·15 | 1 | 0·18 | 1 | 0·10 | 1 | 0·20 | 1 | 0·15 | 2 | 0·36 | 3 |
| Ante-Monsoon ... ... ... | | 6·04 | 10 | 1·30 | 4 | 1·42 | 9 | 1·41 | 6 | 2·56 | 9 | 1·31 | 9 | 1·13 | 7 | 3·09 | 16 |
| 11th April to 4th June .. .. | Ashvini .. .. | 1·03 | 2 | 0·05 | 1 | 0·02 | 1 | 0·13 | 1 | 0·17 | 2 | 0·03 | 2 | 0·34 | 2 | 0·65 | 5 |
| | Bharni .. .. | .. | .. | 0·42 | 1 | .. | .. | 0·16 | 1 | .. | .. | 0·09 | 2 | .. | .. | 0·05 | 1 |
| | Kritika .. .. | 0·92 | 1 | .. | .. | 0·93 | 2 | .. | .. | 0·36 | 1 | .. | .. | 0·14 | 1 | 0·48 | 2 |
| | Rohini .. .. | 4·09 | 7 | 0·83 | 2 | 0·47 | 6 | 1·12 | 4 | 2·03 | 6 | 1·19 | 5 | 0·65 | 4 | 1·91 | 8 |
| Monsoon—Kharíf ... ... | | 9·82 | 49 | 105·48 | 69 | 6·72 | 54 | 12·97 | 47 | 2·82 | 23 | 5·06 | 35 | 3·44 | 15 | 1·90 | 16 |
| 5th June to 14th August.. .. | Mrig .. .. | 0·17 | 4 | 11·56 | 13 | 0·57 | 7 | 0·76 | 7 | 0·66 | 7 | 0·51 | 4 | 0·01 | 1 | 0·38 | 4 |
| | A'rdra .. .. | 0·70 | 11 | 12·46 | 14 | 0·72 | 10 | 0·86 | 7 | 0·32 | 4 | 0·33 | 5 | 0·27 | 1 | 0·33 | 3 |
| | Punarvasu .. | 3·71 | 10 | 34·38 | 14 | 1·73 | 10 | 4·92 | 8 | 1·24 | 6 | 1·82 | 6 | 2·11 | 3 | 0·57 | 3 |
| | Pushya .. .. | 4·49 | 13 | 34·29 | 14 | 3·12 | 14 | 4·28 | 12 | 0·53 | 5 | 1·78 | 12 | 0·72 | 7 | 0·06 | 2 |
| | A'shlesha .. | 0·75 | 11 | 12·79 | 14 | 0·58 | 13 | 2·15 | 13 | 0·07 | 1 | 0·62 | 8 | 0·33 | 3 | 0·56 | 4 |
| Monsoon—Rabi ... ... | | 18·25 | 46 | 41·52 | 50 | 11·56 | 45 | 12·24 | 30 | 15·45 | 25 | 12·62 | 39 | 13·24 | 25 | 21·26 | 35 |
| 15th August to 21st October. | Magha .. .. | 2·95 | 13 | 26·27 | 13 | 4·15 | 13 | 5·32 | 12 | 1·31 | 5 | 1·22 | 11 | 0·62 | 2 | 0·47 | 4 |
| | Purva .. .. | 0·14 | 6 | 5·28 | 13 | 0·19 | 7 | 0·47 | 4 | .. | .. | 1·19 | 5 | 0·11 | 1 | 0·08 | 3 |
| | Uttara .. .. | 11·22 | 13 | 4·08 | 12 | 3·96 | 11 | 3·75 | 7 | 8·50 | 11 | 8·34 | 10 | 9·22 | 12 | 13·63 | 12 |
| | Hast .. .. | 2·16 | 11 | 5·04 | 9 | 2·86 | 11 | 2·49 | 5 | 3·80 | 7 | 1·21 | 11 | 3·24 | 9 | 4·61 | 13 |
| | Chitra .. .. | 1·78 | 3 | 0·85 | 3 | 0·40 | 3 | 0·21 | 2 | 1·84 | 2 | 0·66 | 2 | 0·05 | 1 | 2·47 | 3 |
| Late Rains ... ... ... | | 3·34 | 10 | 1·35 | 4 | 1·86 | 6 | 2·81 | 4 | 1·70 | 6 | 1·73 | 10 | 0·41 | 2 | 1·54 | 6 |
| 22nd October to 30th November. | Sváti .. .. | 0·09 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 0·15 | 2 | .. | .. | 0·22 | 1 |
| | Vishákha .. | 1·95 | 6 | 1·35 | 4 | 1·18 | 4 | 2·35 | 2 | 1·25 | 4 | 0·46 | 6 | 0·41 | 2 | .. | .. |
| | Anurádha .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| December .. .. .. .. | | 1·30 | 2 | .. | .. | 0·68 | 2 | 0·46 | 2 | 0·45 | 2 | 1·12 | 2 | .. | .. | 1·32 | 5 |
| Total ... | | 37·53 | 116 | 149·76 | 128 | 21·71 | 115 | 29·61 | 88 | 22·63 | 64 | 20·92 | 94 | 18·37 | 51 | 28·15 | 76 |
| Approximate average ... | | 28 | ... | ... | ... | 23 | ... | 22 | ... | 18 | ... | 21 | ... | 16 | ... | 17 | ... |

*General Characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukás are uncertain and irregular like the adjoining tálukás of Sholápur.

*Remarks.*—The monsoon was scant at the commencement, though timely. Sowing was delayed from insufficiency of moisture, and considerable anxiety was felt till the good fall of the middle of July (Punarvasu). This induced full kharíf sowings, except in the eastern rabi tracts. The Magha rain, though favourable elsewhere, was still deficient in the east, and anxiety there was not relieved till the full general fall of Uttara. On the whole, though want of fodder was felt in the east, the season, early and late, was good.

## Sholápur District Rainfall of 1885.

| Rain Periods. | Shola'pur. | | Ba'rsi. | | Ma'dha. | | Karma'la. | | Pandharpur. | | Sa'ngola. | | Ma'lsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy years. |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | |
| Early Rains ... ... ... | 0·69 | 3 | 0·47 | 4 | 0·11 | 1 | 0·56 | 3 | 0·09 | 1 | 0·07 | 1 | 0·15 | 1 |
| (1st January to 10th April) | | | | | | | | | | | | | | |
| Ante-Monsoon ... ... ... | 1·33 | 10 | 2·38 | 11 | 1·38 | 9 | 2·90 | 13 | 4·23 | 15 | 2·76 | 8 | 1·85 | 3 |
| 11th April to 4th June .. Ashvini .. | 0·28 | 5 | 0·20 | 3 | 0·18 | 3 | 0·26 | 2 | 0·57 | 3 | 0·28 | 2 | 0·25 | 1 |
| Bharni .. | .. | .. | 0·15 | 1 | .. | .. | 0·50 | 1 | 0·59 | 1 | .. | .. | .. | .. |
| Kritika .. | .. | .. | 1·02 | 2 | 0·15 | 1 | 0·47 | 2 | 1·34 | 3 | 0·70 | 2 | .. | .. |
| Rohini .. | 1·05 | 5 | 1·01 | 5 | 1·05 | 5 | 1·67 | 8 | 1·73 | 8 | 1·78 | 4 | 1·60 | 2 |
| Monsoon—Kharíf ... ... | 6·77 | 28 | 7·92 | 43 | 4·00 | 21 | 3·63 | 27 | 3·57 | 19 | 2·79 | 10 | 1·57 | 5 |
| 5th June to 14th August .. Mrig .. .. | 0·75 | 7 | 1·85 | 8 | 1·51 | 5 | 0·84 | 6 | 1·72 | 6 | 0·22 | 2 | 0·49 | 2 |
| A'rdra.. .. | 0·46 | 3 | 0·18 | 3 | 0·55 | 3 | 0·30 | 2 | 0·24 | 2 | .. | .. | 0·22 | 1 |
| Punarvasu .. | 3·21 | 7 | 4·12 | 11 | 1·29 | 6 | 1·04 | 6 | 1·46 | 8 | 2·22 | 6 | 0·69 | 1 |
| Pushya .. | 1·01 | 5 | 0·69 | 11 | 0·35 | 3 | 0·58 | 9 | .. | .. | 0·35 | 2 | .. | .. |
| A'shlesha .. | 1·34 | 6 | 1·08 | 10 | 0·30 | 4 | 0·37 | 4 | 0·15 | 3 | .. | .. | 0·17 | 1 |
| Monsoon—Rabi... ... ... | 19·66 | 33 | 17·93 | 39 | 23·64 | 36 | 19·40 | 37 | 26·31 | 28 | 21·05 | 27 | 19·34 | 24 |
| 15th August to 21st October .. Magha .. | 0·06 | 3 | 0·88 | 7 | 0·61 | 4 | 2·34 | 6 | 0·02 | 1 | 0·20 | 1 | .. | .. |
| Purva.. .. | 0·40 | 3 | 0·65 | 3 | 0·72 | 4 | 0·11 | 2 | 0·63 | 1 | .. | .. | 0·35 | 1 |
| Uttara .. | 9·83 | 12 | 10·89 | 13 | 13·37 | 12 | 10·15 | 14 | 15·36 | 13 | 10·65 | 12 | 14·66 | 11 |
| Hast .. .. | 7·35 | 12 | 4·81 | 13 | 8·67 | 13 | 6·17 | 12 | 9·56 | 11 | 10·02 | 12 | 3·65 | 11 |
| Chitra.. .. | 2·02 | 3 | 0·70 | 3 | 0·27 | 3 | 0·63 | 3 | 0·74 | 2 | 0·18 | 2 | 0·68 | 1 |
| Late Rains ... ... ... | 2·24 | 10 | 4·39 | 9 | 2·65 | 9 | 4·48 | 10 | 2·54 | 8 | 3·43 | 7 | 2·19 | 7 |
| 22nd October to 30th November . Svâti .. .. | .. | .. | 0·01 | 1 | 0·23 | 3 | 0·10 | 1 | 1·09 | 2 | 1·06 | 3 | 0·48 | 1 |
| Vishákha .. | 0·26 | 3 | 1·72 | 4 | 0·25 | 2 | 2·44 | 5 | 0·22 | 2 | 1·80 | 2 | 0·26 | 2 |
| Anurâdha .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| December .. .. .. .. | 1·98 | 7 | 2·66 | 4 | 2·17 | 4 | 1·94 | 4 | 1·23 | 4 | 0·57 | 2 | 1·45 | 4 |
| Total ... | 30·69 | 84 | 33·09 | 106 | 31·78 | 76 | 30·97 | 90 | 36·74 | 71 | 30·10 | 53 | 25·10 | 40 |
| Approximate average ... | 31 | ... | 29 | ... | 26 | ... | 24 | ... | 28 | ... | 22 | ... | 20 | ... |

*General Characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—The preparatory showers before the regular monsoon were unusually favourable; but the early sowing rains, though timely, were altogether scant. Sowings were delayed till the middle of July. But the good rain which then fell was not followed up by sufficient showers till the middle of August. The kharíf crops were withering, and fodder was very scarce, when the Uttara rain came full and general. The succeeding rabi rains were also good, and the area of rabi was not only full, but partially made up for the deficiency of kharíf, which was hardly half sown. Though rabi sowings were late, the help given by November and December rain was sufficient to give an unusually fine harvest.

## Sátára District Rainfall of 1885.

| Rain Periods. | Sa'ta'ra. | | Koregaon (Reva'ri). | | Wa'i. (Bhatgar). | | Ja'vli (Kas). | | Pa'tan (A'varda). | | Kara'd. | | Ma'n (Mhasvad). | | Khata'v (Maini). | | Kha'na'pur (Chikhli). | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | |
| Early Rains ... ... .. | 0·05 | 1 | 0·22 | 2 | ... | ... | 0·23 | 1 | 1·86 | 2 | 0·46 | 1 | ... | ... | ... | ... | 0·26 | 1 |
| (1st January to 10th April) | | | | | | | | | | | | | | | | | | |
| Ante-Monsoon .. ... ... | 5·80 | 12 | 6·35 | 10 | 4·48 | 10 | 6·05 | 19 | 8·55 | 14 | 6·76 | 11 | 3·53 | 10 | 1·80 | 11 | 4·92 | 11 |
| 11th April to 4th June .. Ashvini .. | 0·42 | 3 | 0·43 | 2 | 0·39 | 2 | 0·45 | 5 | 1·02 | 4 | 0·15 | 1 | 0·43 | 3 | 0·66 | 6 | 0·74 | 2 |
| Bharni .. | 0·18 | 1 | .. | .. | 0·12 | 1 | 0·39 | 1 | 0·28 | 1 | 0·05 | 1 | .. | .. | .. | .. | 0·30 | 1 |
| Kritika .. | .. | .. | 0·08 | 1 | .. | .. | 0·62 | 2 | 1·80 | 2 | 0·26 | 1 | 1·15 | 2 | 0·39 | 2 | .. | .. |
| Rohini .. | 5·20 | 8 | 5·84 | 7 | 3·97 | 7 | 4·59 | 11 | 5·45 | 7 | 6·30 | 8 | 1·95 | 5 | 0·75 | 3 | 3·88 | 8 |
| Monsoon—Kharíf ... ... | 22·84 | 58 | 10·75 | 36 | 21·10 | 65 | 92·37 | 71 | 28·41 | 47 | 12·31 | 40 | 3·37 | 13 | 3·87 | 24 | 6·25 | 31 |
| 5th June to 14th August .. Mrig .. .. | 1·78 | 9 | 0·59 | 2 | 0·90 | 13 | 5·56 | 15 | 1·99 | 7 | 1·31 | 7 | 0·50 | 2 | 0·24 | 3 | 0·56 | 4 |
| A'rdra .. | 1·84 | 11 | 0·79 | 7 | 2·08 | 12 | 13·10 | 14 | 3·70 | 9 | 0·40 | 3 | 1·00 | 1 | 0·02 | 1 | 0·18 | 3 |
| Punarvasu .. | 5·96 | 10 | 3·57 | 6 | 7·60 | 13 | 25·29 | 14 | 8·86 | 9 | 3·67 | 6 | 1·18 | 4 | 1·88 | 7 | 1·71 | 5 |
| Pushya .. | 9·97 | 14 | 4·71 | 13 | 6·84 | 14 | 34·30 | 14 | 11·51 | 14 | 5·52 | 14 | 0·37 | 4 | 1·11 | 9 | 2·41 | 12 |
| A'shlesha .. | 3·29 | 14 | 1·09 | 8 | 3·68 | 13 | 14·12 | 14 | 2·35 | 8 | 1·41 | 10 | 0·32 | 2 | 0·62 | 4 | 1·39 | 7 |
| Monsoon—Rabi... ... ... | 16·56 | 41 | 21·72 | 30 | 13·58 | 46 | 47·28 | 57 | 13·89 | 35 | 11·89 | 35 | 15·29 | 30 | 16·76 | 32 | 9·18 | 24 |
| 15th August to 21st October .. Magha .. | 5·64 | 13 | 3·20 | 9 | 3·54 | 11 | 29·39 | 13 | 5·85 | 12 | 3·05 | 10 | 0·11 | 3 | 0·62 | 6 | 1·25 | 7 |
| Purva .. | 0·66 | 7 | 0·21 | 2 | 0·29 | 9 | 4·71 | 13 | 0·47 | 6 | 0·28 | 4 | 0·54 | 3 | 0·04 | 2 | 0·04 | 1 |
| Uttara .. | 4·35 | 9 | 10·61 | 9 | 6·40 | 13 | 4·36 | 13 | 3·12 | 6 | 2·02 | 10 | 7·32 | 13 | 11·51 | 13 | 3·05 | 9 |
| Hast .. | 5·86 | 10 | 7·46 | 9 | 3·24 | 11 | 7·96 | 13 | 4·04 | 9 | 5·39 | 9 | 6·62 | 10 | 3·49 | 10 | 2·72 | 5 |
| Chitra .. | 0·05 | 2 | 0·24 | 1 | 0·11 | 2 | 0·86 | 5 | 0·41 | 2 | 1·15 | 2 | 0·70 | 1 | 1·10 | 1 | 2·12 | 2 |
| Late Rains .. ... ... | 2·05 | 8 | 2·52 | 5 | 0·94 | 5 | 2·78 | 13 | 2·62 | 7 | 2·46 | 9 | 2·63 | 9 | 1·02 | 6 | 2·01 | 5 |
| 22nd October to 30th November . Sváti .. .. | 0·56 | 3 | 0·30 | 1 | 0·11 | 2 | 1·30 | 3 | 0·85 | 2 | 1·00 | 3 | 0·61 | 3 | 0·28 | 1 | 0·79 | 2 |
| Vishákha .. | 1·29 | 3 | 2·14 | 3 | 0·32 | 1 | 1·20 | 6 | 1·73 | 3 | 1·21 | 5 | 0·64 | 2 | 0·08 | 1 | 1·02 | 2 |
| Anurádha .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| December .. .. .. .. | 0·20 | 2 | 0·08 | 1 | 0·51 | 2 | 0·28 | 4 | 0·04 | 2 | 0·25 | 1 | 1·38 | 4 | 0·66 | 4 | 0·20 | 1 |
| Total ... | 47·30 | 120 | 41·56 | 83 | 40·10 | 126 | 148·71 | 161 | 55·33 | 105 | 33·88 | 96 | 24·82 | 62 | 23·45 | 73 | 22·62 | 72 |
| Approximate average ... | 40 | ... | 27 | .. | 38 | ... | 72 | ... | 65 | ... | 27 | ... | 21 | ... | 21 | ... | 24 | ... |

*General Characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—No record available for Válva and Tásgaon tálukás.

Preparatory rains very abundant, giving ample moisture for rice and similar crops on the west. The kharíf fall was light, and general sowings much delayed. Full relief came at the middle of July, and the area of kharíf was full. The rabi rain till Uttara was insufficient, and the standing kharíf of the rabi tracts was hardly kept alive. Hast rain was very good and seasonable, removing the fodder scarcity on the east, which had necessitated importation from more favoured tracts. The kharíf harvest was below average. The rabi above. Gram and wheat were especially good.

## Belgaum District Rainfall of 1885.

| Rain Periods. | | Belgaum. | | Sampgaon (Nesargi). | | Parasgad (Gurla'hasur). | | Goka'k (Dhupda'l). | | Chikodi (Gotur). | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | |
| Early Rains ... ... ... ... | | 0·91 | 4 | 0·35 | 1 | 0·98 | 5 | 0·38 | 5 | ... | ... |
| (1st January to 10th April) | | | | | | | | | | | |
| Ante-Monsoon ... ... ... ... | | 3·82 | 13 | 7·13 | 7 | 3·50 | 10 | 4·73 | 10 | 5·96 | 7 |
| 11th April to 4th June... | Ashvini ... | 1·01 | 3 | 0·34 | 2 | 0·01 | 1 | 0·15 | 1 | ... | ... |
| | Bharni ... | 0·41 | 1 | 6·10 | 2 | 0·13 | 1 | 1·10 | 3 | 0·05 | 1 |
| | Kritika ... | .. | ... | 0·55 | 2 | 0·12 | 2 | ... | ... | ... | ... |
| | Rohini ... | 2·40 | 9 | 0·14 | 1 | 3·24 | 6 | 3·48 | 6 | 5·91 | 6 |
| Monsoon—Kharíf ... ... ... | | 22·35 | 64 | 13·27 | 27 | 5·59 | 26 | 8·13 | 28 | 7·70 | 18 |
| 5th June to 14th August... | Mrig ... | 1·81 | 13 | 1·24 | 2 | 1·72 | 3 | 4·29 | 2 | 2·50 | 3 |
| | A'rdra ... | 1·57 | 11 | 0·51 | 3 | 0·26 | 2 | 0·28 | 3 | 0·97 | 4 |
| | Punarvasu ... | 2·98 | 13 | 0·60 | 4 | 1·12 | 6 | 1·18 | 8 | 0·95 | 6 |
| | Pushya ... | 9·42 | 14 | 4·33 | 12 | 0·77 | 10 | 1·10 | 10 | 2·22 | 4 |
| | A'shlesha ... | 6·57 | 13 | 6·59 | 6 | 1·72 | 5 | 1·28 | 5 | 1·06 | 1 |
| Monsoon—Rabi ... ... ... ... | | 17·46 | 44 | 31·67 | 27 | 10·41 | 39 | 10·24 | 24 | 13·39 | 12 |
| 15th August to 21st October... | Magha ... | 5·02 | 13 | 9·23 | 8 | 0·77 | 11 | 0·59 | 7 | 3·09 | 4 |
| | Purva ... | 0·33 | 7 | ... | ... | 0·14 | 5 | ... | ... | ... | ... |
| | Uttara ... | 2·85 | 7 | 2·55 | 7 | 4·84 | 9 | 3·14 | 7 | 1·96 | 2 |
| | Hast ... | 6·43 | 13 | 15·39 | 9 | 2·32 | 10 | 4·30 | 8 | 7·25 | 4 |
| | Chitra ... | 2·83 | 4 | 4·50 | 3 | 2·34 | 4 | 2·21 | 2 | 1·09 | 2 |
| Late Rains ... ... ... ... | | 5·05 | 11 | 3·68 | 7 | 1·65 | 12 | 3·93 | 10 | 3·25 | 4 |
| 22nd October to 30th November... | Sváti ... | 3·16 | 4 | 2·17 | 3 | 0·91 | 3 | 1·22 | 4 | 1·13 | 2 |
| | Vishákha ... | 1·84 | 5 | 0·51 | 2 | 0·49 | 5 | 2·34 | 3 | 2·12 | 2 |
| | Anurádha ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| December... ... ... ... ... | | 0·05 | 2 | 1·00 | 2 | 0·25 | 4 | 0·37 | 3 | ... | ... |
| Total ... | | 49·59 | 136 | 56·10 | 69 | 22·13 | 92 | 27·41 | 77 | 30·30 | 41 |
| Approximate average ... | | 47 | ... | 23 | ... | 20 | ... | 17 | ... | 21 | ... |

*General Characteristics.*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—No return available from the Khánápur and Athni tálukás.

The ante-monsoon showers—again good—are especially valued in parts of this district (west and south) for rice sowing. The monsoon broke in time and favourably, but a long break till the end of July was detrimental. It was relieved then, except in the north-east. The rabi rains were good, except in the east and north. Here the prospects became so bad that the cattle were driven to the Gháts. All anxiety was removed by the heavy Uttara fall. The rabi area was large, and prospects very good till damped by excessive late rains, bringing blight and rust. The total fall of the year was above average, but it was not seasonable, and the year was not a favourable one.

## Bijápur District Rainfall of 1885.

| Rain Periods. | | Bijápur. | | Indi. | | Sindgi. | | Bágevádi. | | Muddebihál. | | Bágalkot. | | Bádámi. | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | | Inches | |
| Early Rains ... ... ... | | 0·17 | 5 | 0·33 | 4 | ... | ... | 0·28 | 1 | 0·64 | 4 | 0·35 | 3 | ... | ... | 0·15 | 1 |
| (1st January to 10th April) | | | | | | | | | | | | | | | | | |
| Ante-Monsoon ... ... ... | | 4·99 | 11 | 1·86 | 9 | 3·17 | 12 | 2·70 | 8 | 2·55 | 8 | 3·32 | 10 | 1·81 | 5 | 4·77 | 11 |
| 11th April to 4th June | Ashvini ... | 1·77 | 3 | 0·43 | 2 | 1·31 | 4 | 0·80 | 2 | ... | ... | 0·18 | 2 | ... | ... | 1·52 | 3 |
| | Bharni ... | 0·23 | 1 | ... | ... | 0·39 | 2 | 0·16 | 2 | 0·34 | 2 | 1·80 | 2 | 0·25 | 1 | 1·27 | 2 |
| | Kritika ... | 1·40 | 1 | 0·11 | 1 | 0·64 | 3 | 1·10 | 1 | 0·65 | 2 | 0·77 | 3 | 0·07 | 1 | 0·54 | 1 |
| | Rohini ... | 1·59 | 6 | 1·32 | 6 | 0·83 | 3 | 0·64 | 3 | 1·56 | 4 | 0·57 | 3 | 1·49 | 3 | 1·44 | 5 |
| Monsoon—Kharíf ... ... | | 4·81 | 27 | 6·95 | 25 | 8·45 | 26 | 2·97 | 18 | 2·82 | 25 | 4·09 | 23 | 5·34 | 11 | 4·28 | 23 |
| 5th June to 14th August | Mrig ... | 0·59 | 4 | 0·57 | 6 | 0·58 | 3 | 0·37 | 5 | 0·39 | 5 | 0·49 | 4 | 0·81 | 2 | 1·66 | 5 |
| | Árdra ... | 0·02 | 2 | 2·29 | 5 | 3·34 | 5 | .. | ... | ... | ... | 1·10 | 2 | ... | ... | ... | ... |
| | Punarvasu ... | 3·19 | 10 | 2·54 | 7 | 3·41 | 9 | 2·27 | 6 | 1·92 | 11 | 1·33 | 10 | 3·38 | 5 | 1·18 | 7 |
| | Pushya ... | 0·67 | 8 | 0·36 | 2 | 0·52 | 6 | 0·13 | 5 | 0·22 | 7 | 0·52 | 4 | 0·38 | 2 | 0·45 | 6 |
| | Áshlesha ... | 0·34 | 3 | 1·19 | 5 | 0·60 | 3 | 0·20 | 2 | 0·29 | 2 | 0·65 | 3 | 0·77 | 2 | 0·99 | 5 |
| Monsoon—Rabi ... ... | | 15·62 | 35 | 13·51 | 27 | 17·38 | 28 | 17·01 | 29 | 16·63 | 30 | 10·00 | 31 | 12·00 | 18 | 11·60 | 27 |
| 15th August to 21st October | Magha ... | 0·07 | 2 | ... | ... | 0·05 | 1 | 0·04 | 2 | 0·10 | 3 | 0·26 | 4 | ... | ... | 0·21 | 2 |
| | Purva ... | 0·12 | 3 | 0·24 | 1 | 0·15 | 1 | ... | ... | 0·01 | 1 | 0·10 | 1 | 0·40 | 2 | 0·13 | 1 |
| | Uttara ... | 6·36 | 12 | 5·82 | 11 | 6·28 | 12 | 9·52 | 13 | 9·49 | 12 | 4·60 | 11 | 6·06 | 6 | 5·02 | 11 |
| | Hast ... | 7·78 | 12 | 7·01 | 12 | 8·85 | 10 | 6·87 | 11 | 6·86 | 12 | 4·21 | 12 | 5·19 | 9 | 5·94 | 11 |
| | Chitra ... | 1·29 | 6 | 0·44 | 3 | 2·05 | 4 | 0·58 | 3 | 0·17 | 2 | 0·83 | 3 | 0·35 | 1 | 0·30 | 2 |
| Late Rains ... ... ... | | 4·59 | 9 | 5·19 | 9 | 3·81 | 9 | 8·81 | 14 | 3·14 | 8 | 6·88 | 11 | 4·61 | 7 | 3·18 | 8 |
| 22nd October to 30th November | Sváti ... | 1·45 | 4 | 1·41 | 3 | 1·36 | 2 | 3·27 | 3 | 1·56 | 3 | 3·20 | 2 | 0·35 | 1 | 1·07 | 2 |
| | Vishákha ... | 1·70 | 3 | 0·41 | 3 | 1·18 | 3 | 2·10 | 5 | 1·12 | 3 | 1·64 | 5 | 1·61 | 4 | 1·76 | 3 |
| | Anurádha ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| December ... ... ... ... | | 1·44 | 2 | 3·37 | 3 | 1·27 | 4 | 3·44 | 6 | 0·46 | 2 | 2·04 | 4 | 2·65 | 2 | 0·35 | 3 |
| Total ... | | 30·18 | 87 | 27·84 | 74 | 32·81 | 75 | 31·77 | 70 | 25·78 | 75 | 24·64 | 78 | 23·76 | 41 | 23·98 | 70 |
| Approximate average ... | | 23·88 | ... | 27·36 | ... | 26·34 | ... | 22·39 | ... | 23·30 | ... | 22·39 | ... | 24·27 | ... | 23·37 | ... |

*General Characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukás of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Ante-monsoon showers, which are only valuable to allow of early ploughing, were very favourable. But the kharíf rains were scanty. Sowings were delayed till the end of July. The rainfall was very unseasonable and deficient till the middle of September. A total failure of the kharíf harvest appeared imminent. The Uttara and Hast rains saved the kharíf and gave a good rabi. The kharíf harvest was about 4 annas, taking 12 annas as average. The rabi was a bumper crop north of Bijápur and up to average everywhere. The season as a whole was greatly better than that of the previous year.

## Dhárwár District Rainfall of 1885.

| Rain Periods. | | Kod (Masur). | | Ránebennur (Medleri). | | Gadag (Dambal). | |
|---|---|---|---|---|---|---|---|
| | | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | | Inches. | | Inches. | | Inches. | |
| Early Rains ... ... ... ... (1st January to 10th April) | | 0·10 | 1 | 0·31 | 2 | 0·11 | 1 |
| Ante-Monsoon ... ... ... ... | | 7·78 | 8 | 3·53 | 5 | 5·50 | 11 |
| 11th April to 4th June | Ashvini ... | ... | ... | ... | ... | 0·65 | 1 |
| | Bharni ... | 2·80 | 4 | 0·81 | 1 | 3·04 | 4 |
| | Kritika ... | ... | ... | 1·82 | 2 | 0·73 | 2 |
| | Rohini ... | 4·98 | 4 | 0·90 | 2 | 1·08 | 4 |
| Monsoon—Kharif... ... ... ... | | 8·87 | 33 | 3·67 | 14 | 3·84 | 8 |
| 5th June to 14th August | Mrig ... | 1·76 | 6 | 1·20 | 1 | 0·10 | 1 |
| | A'rdra ... | 0·71 | 2 | ... | ... | 0·15 | 1 |
| | Punarvasu ... | 1·98 | 9 | 0·34 | 3 | 2·89 | 3 |
| | Pushya ... | 1·86 | 10 | 1·38 | 6 | 0·02 | 1 |
| | A'shlesha ... | 2·56 | 6 | 0·75 | 4 | 0·68 | 2 |
| Monsoon—Rabi ... ... ... ... | | 9·18 | 19 | 13·47 | 14 | 13·41 | 17 |
| 15th August to 21st October. | Magha ... | 0·49 | 3 | 0·19 | 3 | 0·21 | 1 |
| | Purva ... | 0·39 | 1 | ... | ... | 0·21 | 1 |
| | Uttara ... | 0·50 | 2 | ... | ... | 7·03 | 8 |
| | Hast ... | 6·41 | 11 | 10·74 | 8 | 5·13 | 6 |
| | Chitra ... | 1·39 | 2 | 2·54 | 3 | 0·83 | 1 |
| Late Rains ... ... ... ... | | 2·94 | 10 | 5·91 | 11 | 1·77 | 5 |
| 22nd October to 30th November. | Sváti ... | 0·70 | 2 | 4·55 | 3 | 0·45 | 2 |
| | Vishákha ... | 1·31 | 3 | 0·40 | 3 | 0·03 | 1 |
| | Anurádha ... | ... | ... | ... | ... | ... | ... |
| December ... ... ... ... | | 0·93 | 5 | 0·96 | 5 | 1·29 | 2 |
| Total ... | | 28·87 | 71 | 26·89 | 46 | 24·63 | 42 |
| Approximate average ... | | 26 | .... | 22 | ... | 25 | ... |

*General Characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur tálukás are partly malád.

The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: "Good rain won't give a big crop, nor will bad rain bring famine."

This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Return from only 3 tálukás out of 11 available.

The ante-monsoon showers in this district are more needed even than in Belgaum. They give opportunity to prepare the kharíf lands and to sow rice and also to relieve the chronic water scarcity of the black-soil plain. They were full. The kharíf fall was scant throughout. Early jowári sowings were retarded, and rice was greatly in need of rain. Good rain, except in the black-soil tracts, came in August. Here the kharíf area was very small. The Uttara rain was very beneficial in the black soil, but was deficient in the malád. The continuous fall of Uttara, Hast and Chitra made rabi sowings late, but the crops were vigorous and yielded well. The rice crop was considerably below average. Jowári and bájri hardly up to average, but the rabi was all good.

# APPENDICES.

# APPENDICES.

## A.

*(Itinerary referred to in para. 1 of the Report.)*

**November.**—Was present at the reaping of the experimental ráb plots at Karjat (2nd), Igatpuri (4th) and Lonávla (20th). With the Forest Commission at Thána and Karjat, 2nd to 8th. Visited Bhadgaon Farm 21st to 23rd.

**December.**—On 4th visited the Alegaon Commissariat Farm. On 7th met Mr. T. Wardle arrived from England to collect specimens of silk for the Indian and Colonial Exhibition. From 11th to 19th with the Forest Commission at Kolhár (Thána).

**January.**—Two visits to Karjat to plan new ráb experiments, and then on 13th started for Bijápur and Dhárwár to make final arrangements for the transfer of the Bijápur records. Tour in Bijápur District visiting parts of the Bijápur, Bágevádi, Bágalkot, Sindgi and Indi tálukás; visiting the town of Kaládgi to form an opinion on Mr. Crawford's scheme of utilizing the old Government buildings there as an Agricultural Farm and Training College.

**February.**—Returned to Head-quarters on the 10th. On 15th left for Hánsot in Gujarát to conduct trials with Steam Thresher. Thence on 24th visited Mr. Bomanji A. Dalál's Farm at Rustumpura in the Panch Maháls. On the 28th reached Wadhwán for the Agricultural Show.

**March.**—Returned to Poona on the 6th. On 23rd left for Bassein to join the Forest Commission.

**April.**—On the departure of the Commission to Alibág remained till the 25th, conducting special enquiries on behalf of the Commission in the Bassein, Máhim and Dáhánu tálukás of Thána, and the Balsár and Párdi tálukás of Surat. Prepared a memorandum on the "Garden Cultivation of the Bassein and Máhim Tálukás." On 26th went to the Bhadgaon Farm to make further trials with the Steam Wheat Threshing Machine. Returned to Head-quarters on the 28th.

**May.**—On the 3rd moved to Khandála to be present at the Forest Commission sittings at Lonávla, and to make visits to Karjat for ráb experiments.

**June.**—Spent a week from the 19th at the Bhadgaon Farm.

**July.**—Thence visited Karjat for the ráb experiments.

**August.**—On 11th to 13th visited the experimental farm at Nadiád in Gujarát. On return was present at the first meeting of the Managing Committee of the Bombay Veterinary College.

**September.**—Spent a week in Dhárwár from the 6th.

**October.**—Was at the Bhadgaon Farm (20th to 24th). At Karjat on the 25th and 26th to supervise the cutting of rice in the ráb plots.

## B.

*(Referred to in para. 54 of the Report).*

*112, Savage Gardens, London, E.C.*
*September 23, 1886.*

E. C. OZANNE, Esquire,
Director of Agriculture,
Poona.

Dear Sir,

We received your favour of the 16th August, and beg to tender our thanks for the care devoted to experiments on the seeds we sent you.

We have examined the samples as grown from them and beg to say :—

*White Beans.*—They make a very good sample, and seem to retain the exact characteristics of the original seed. These beans would be a good marketable article in England as well as on the continent of Europe and in America, and as it is a crop not yet much overdone, and therefore ranging in value *far above* wheat and other breadstuff, we consider its cultivation would make a profitable addition to Indian agriculture; at the same time it may be well to mention that these beans are not grown in England at all, as they do not take kindly to a northern latitude, so that the import from India would not supersede any branch of the native agriculture in England.

Acting on your suggestion, we are going to send, say, ½ ton seed out; old beans are no more obtainable, and the new ones will come to market in about a month, when we will forward the above quantity; we leave it to you to distribute them either gratis or for some small payment, if you think the latter would tend to make farmers more careful of the seed. Just to give you an idea of value, we wish to say, these beans sell here at about 10s per cwt. We should fancy that for a start this quantity might be sufficient; still, if you find more interest evinced and perhaps larger farmers wish to go in for them, we will be glad to send out any quantity required simply to sell them at cost price.

*Peas.*—The sample you sent us shows that the pea itself will grow there very well, and, what is also a great point, it remains free from the European insect, which in Europe do such a great deal of harm to the crops. However, there is *one* point that would detract from the value of this particular variety in the eyes of the European buyer, *viz.*, its faded colour. This particular pea is specially liked here when deep green, and in such a condition would fetch a very high price; still even as it is it would realise close on 40s per quarter (504 lbs.). We would suggest, if your farmers are desirous to cultivate peas of that kind, to go in for the large *white* Victoria Pea, or the so-called Blackeyed Victoria, a variety which is a native of Canada. Of both these varieties we send you post samples.

*Mustard Seed.*—The seed was of English growth, and we must conclude that the change of climate was too striking to admit of immediate acclimatization. The same plant is cultivated in California, and we intend at a future opportunity to send you a sample of such, which, we trust, will have a better result.

About *Long Millet* (or *Canary Seed*) it may interest you to know that trials through the agency of the Cawnpore Department of Agriculture and Commerce have been most successful. The said Department sent us a copious sample of the seed, which in point of quality could not be exceeded by European seed.

*The Gram* we sent you is similar to Cabul gram in colour and general appearance, but the size of the grain is quite six times as large as the Cabul; we should judge that, irrespective of the superior properties of so large a pea, the yield on the same acreage must be by far in favour of the same.

*Lentils.*—We think we made a mistake sending out European lentils. We will send you the same variety, but of Chilian growth, for renewed trial if you care to do so.

Finally, we beg to draw your attention to the cultivation of *barley* of a quality superior to the native grain. Such barley as we send you a sample of, which is of Californian extraction, commands here as well as all over Europe an exceptionally high price; and as we know, from recent experience in our Import Department, that fine barley, only differing in shape from the sample we send you, can be grown in India, we think it will be well worth any of your farmers' while to try this superior quality. We will also try to send you a sample of Chili barley, which is very similar and commands a similar value. Both these varieties are originally taken from European seed. We could also send you samples of direct European growth, but it seems that plants that have already modified their habits by vegetation in a hot climate are best suited for your country.

We are, &c.,
(Signed) PRASCHKAUER & Co.

# C.

*Exports of Indian Wheat from the Port of Bombay to all Ports beyond the Presidency from 1880 to 1886, (referred to in para. 70 of the Report).*

| Months. | Years. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. | 1886. |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... ... ... | 2,927 | 21,768 | 85,674 | 31,019 | 15,285 | 41,846 | 31,424 |
| February ... ... ... | 1,626 | 19,275 | 40,239 | 25,403 | 15,933 | 32,366 | 24,484 |
| March ... ... ... | 3,407 | 20,000 | 30,557 | 29,516 | 14,997 | 45,824 | 28,402 |
| April ... ... ... | 4,985 | 32,481 | 30,390 | 37,503 | 15,230 | 38,933 | 71,581 |
| May ... ... ... | 17,110 | 42,428 | 67,886 | 76,205 | 44,831 | 56,871 | 124,232 |
| June ... ... ... | 19,407 | 52,236 | 37,190 | 82,881 | 54,894 | 66,602 | 56,341 |
| July ... ... ... | 15,055 | 47,369 | 19,386 | 55,921 | 65,437 | 33,379 | 38,715 |
| August ... ... ... | 7,832 | 28,172 | 5,396 | 32,425 | 45,546 | 38,004 | 52,896 |
| September... ... ... | 4,193 | 35,132 | 13,797 | 36,265 | 30,974 | 48,975 | ..... |
| October ... ... ... | 6,527 | 48,835 | 22,317 | 18,466 | 19,045 | 52,808 | ..... |
| November... ... ... | 8,652 | 76,714 | 34,159 | 29,319 | 28,038 | 59,598 | ..... |
| December ... ... ... | 22,991 | 48,559 | 32,703 | 34,508 | 27,806 | 53,977 | ..... |
| Total ... | 114,712 | 472,969 | 419,694 | 489,431 | 378,016 | 569,183 | 428,075 |

# D.

*Rates of Exchange and Freight 1885 and 1886 (referred to in para. 70 of the Report).*

| Week ending | Exchange. On England, Bank Bills (Sight). 1885. | Exchange. On England, Bank Bills (Sight). 1886. | Freight, Liverpool. 1885. | Freight, Liverpool. 1886. |
|---|---|---|---|---|
| | S. d. | S. d. | £. s. d. | £. s. d. |
| 7th January ... ... | 1 $7\frac{1}{4}$ | 1 $5\frac{3}{4}$ | 1 2 6 | 0 13 9 |
| 14th do. ... ... | 1 $7\frac{3}{16}$ | 1 $5\frac{7}{8}$ | 1 2 6 | 0 15 0 |
| 21st do. ... ... | 1 $7\frac{1}{8}$ | 1 $5\frac{15}{16}$ | 1 3 9 | 0 12 6 |
| 28th do. ... ... | 1 7 | 1 6 | 1 3 9 | 0 12 6 |
| 4th February ... | 1 $7\frac{1}{8}$ | 1 $5\frac{27}{32}$ | 1 2 6 | 0 12 6 to 0 13 9 |
| 11th do. ... ... | 1 7 | 1 $5\frac{1}{8}$ | 1 5 0 | 0 11 3 to 0 12 6 |
| 18th do. ... ... | 1 $6\frac{13}{16}$ | 1 $6\frac{1}{32}$ | 1 5 0 | 0 13 9 |
| 26th do. ... ... | 1 $6\frac{27}{32}$ | 1 6 | 1 3 9 | 0 15 0 |
| 4th March ... ... | 1 $6\frac{7}{8}$ | 1 $5\frac{31}{32}$ | 1 3 9 | 0 15 0 |
| 11th do. ... ... | 1 $6\frac{29}{32}$ | 1 $5\frac{31}{32}$ | 1 2 6 to 1 3 9 | 0 15 0 |
| 18th do. ... ... | 1 $6\frac{31}{32}$ | 1 $5\frac{31}{32}$ | 1 3 9 | 1 1 3 |
| 25th do. ... ... | 1 $6\frac{29}{32}$ | 1 $5\frac{15}{16}$ | 1 3 9 | 0 18 9 |
| 1st April ... ... | 1 $6\frac{7}{8}$ | 1 $5\frac{15}{16}$ | 1 3 9 | 0 17 6 to 0 18 9 |
| 8th do. ... ... | 1 $6\frac{13}{16}$ | 1 $5\frac{7}{8}$ | 1 3 9 to 1 5 0 | 0 17 6 to 0 18 9 |
| 15th do. ... ... | 1 7 | 1 $5\frac{3}{4}$ | 1 3 9 | 0 16 3 to 0 17 6 |
| 22nd do. ... ... | 1 $7\frac{3}{32}$ | 1 $5\frac{25}{32}$ | 1 3 9 to 1 5 0 | 0 16 3 |
| 29th do. ... ... | 1 $7\frac{3}{8}$ | 1 $5\frac{25}{32}$ | 1 6 3 | 0 16 3 to 0 17 6 |
| 6th May ... ... | 1 $7\frac{5}{16}$ | 1 $5\frac{19}{32}$ | 1 3 9 to 1 5 0 | 0 17 6 |
| 13th do. ... ... | 1 $7\frac{3}{16}$ | 1 $5\frac{13}{32}$ | 1 3 9 to 1 5 0 | 0 18 9 |
| 20th do. ... ... | 1 $6\frac{7}{8}$ | 1 $5\frac{1}{4}$ | 1 5 0 | ..... |

| Week ending | Exchange. On England, Bank Bill. (Sight). 1885. | Exchange. On England, Bank Bill. (Sight). 1886. | Freight, Liverpool. 1885. | Freight, Liverpool. 1886. |
|---|---|---|---|---|
| | S. d. | S. d. | £ s. d. | £ s. d. |
| 25th May ... ... | 1 7 | 1 $5\frac{7}{16}$ | 1 2 6 | 0 18 9 |
| 31st do. ... ... | 1 $6\frac{29}{32}$ | 1 $5\frac{9}{32}$ | 1 3 9 to 1 5 0 | 0 18 9 |
| 7th June ... ... | 1 $6\frac{15}{16}$ | 1 $5\frac{3}{8}$ | 1 0 0 | 0 18 9 |
| 14th do. ... ... | 1 $6\frac{29}{32}$ | 1 $5\frac{7}{16}$ | 0 18 9 | 0 18 9 |
| 21st do. ... ... | 1 $6\frac{29}{32}$ | 1 $5\frac{3}{8}$ | 0 17 6 | 0 17 6 |
| 28th do. ... ... | 1 $6\frac{13}{16}$ | 1 $5\frac{3}{8}$ | 0 17 6 | 0 16 3 |
| 6th July ... ... | 1 $6\frac{21}{32}$ | 1 $5\frac{1}{8}$ | 0 17 6 to 0 18 9 | 0 15 0 to 0 16 3 |
| 12th do. ... ... | 1 $6\frac{3}{4}$ | 1 $4\frac{29}{32}$ | 0 17 6 | 0 15 0 |
| 19th do. ... ... | 1-$6\frac{23}{32}$ | to 1-$6\frac{3}{4}$ 1 $4\frac{27}{32}$ | 0 16 3 | 0 15 0 |
| 26th do. ... ... | 1 $6\frac{25}{32}$ | 1 $4\frac{13}{16}$ | 0 16 3 | 0 16 3 |
| 2nd August ... ... | 1 $6\frac{13}{16}$ | 1 $4\frac{1}{16}$ | 0 16 3 | 0 17 6 |
| 9th do. ... ... | 1 $6\frac{27}{32}$ | 1 $4\frac{31}{16}$ | 0 17 6 to 0 18 9 | 0 17 6 |
| 16th do. ... ... | 1 $6\frac{23}{32}$ | 1 $4\frac{27}{32}$ | 0 17 6 to 0 18 9 | 1 0 0 |
| 24th do. ... ... | 1 $6\frac{9}{16}$ | 1 $4\frac{5}{16}$ | 0 16 3 | 1 0 0 |
| 30th do. ... ... | 1 $6\frac{9}{16}$ | 1 $4\frac{11}{32}$ | 0 16 3 to 0 17 6 | 1 0 0 |
| 6th September ... | 1 $6\frac{5}{16}$ | 1 $4\frac{19}{32}$ | 0 16 3 to 0 17 6 | 1 0 0 |
| 13th do. ... ... | 1 $6\frac{3}{16}$ | 1 $4\frac{19}{32}$ | 0 15 0 | 1 2 6 |
| 24th do. ... ... | 1 $6\frac{1}{4}$ | 1 $4\frac{31}{32}$ | 0 17 6 to 0 18 9 | 1 2 6 |
| 30th do. ... ... | 1 $6\frac{7}{32}$ | 1 $5\frac{7}{32}$ | 0 18 9 to 1 0 0 | 0 17 6 |
| 8th October... ... | 1 $6\frac{5}{32}$ | 1 $5\frac{3}{16}$ | 1 0 0 to 1 1 3 | 0 17 6 |
| 14th do. ... ... | 1 $6\frac{3}{16}$ | 1 $5\frac{13}{32}$ | 1 1 3 | 0 16 3 |

*Annual Report of the Director of Agriculture, Bombay Presidency, for the year* 1885-86.

No. 977.

REVENUE DEPARTMENT.

Bombay Castle, 11th February 1887.

Letter from the Director of Agriculture, No. 2435, dated 1st November 1886—Submitting the Third Annual Report of the Agricultural Department of the Bombay Presidency for the year 1885-86.

RESOLUTION.—This full and interesting report shows that Mr. Ozanne's duties as a member of the Forest Commission did not prevent him from paying the most careful attention to the wide range of subjects with which his department is concerned.

2. The principal alteration in the staff of the Agricultural Department during the year was the appointment in July 1886 of an experienced Survey Officer, Mr. Price, to take charge of the survey record of the Dhárwár and Bijápur Districts and to supervise the Circle Inspectors appointed in those districts in the previous year. It is satisfactory to find that these Circle Inspectors, though new to their duties and consequently unable to do as much as will be expected of them in future, have already, by discovering a large number of encroachments, done useful work.

3. Mr. Ozanne includes in his report a very complete summary and review of crop experiments conducted at the Government farms at Bhadgaon and Hyderabad during the year. One of the most instructive experiments made at the former farm showed that on the partial failure of a cotton crop the interculture of rabi crops, especially gram, with the cotton is much superior to the local practice of ploughing up the cotton altogether and substituting another crop. Another useful experiment showed the extreme difficulty of substituting in any locality one distinct kind of wheat for another, such as a soft for a hard; and Mr. Ozanne has consequently come to the conclusion that, instead of trying to improve local varieties of wheat, efforts can be more usefully directed towards improving the present method of preparing wheat for the market and preventing the mixture of dirt now so general. A steam wheat thresher has been tried with great success; and the prospect of the formation of a Company to import these machines and work them for hire may be considered as very satisfactory.

4. Information regarding the crop experiments conducted at the private Nadiád farm was not available at the time when Mr. Ozanne submitted his report. The usefulness of the Association, however, is evident from the facts that it has established an Agricultural Show, an Agricultural Class at the High School, and a shop for the sale of selected seed, and publishes an agricultural pamphlet largely circulated throughout Gujarát.

5. The subject of manures engaged Mr. Ozanne's special attention during the year. The importance of bone-manure in India is shown succinctly in a quotation from a report by Mr. Woodrow, of the College of Science farm, where successful experiments with a bone crushing mill have been made. Experiments with cow-dung and cow-dung ashes have shown clearly that though the former is much superior in the long run, the ashes nevertheless form a far too valuable manure to be recklessly wasted as is now unfortunately the practice in some parts of the country. Somewhat akin to these experiments were the important ráb experiments conducted by Mr. Ozanne personally in the Thána District, and designed to ascertain, for the guidance of the Forest Commission, how far the local practice of burning branches of trees on the seed beds of rice fields is necessary. Mr. Ozanne's special report on the subject has been forwarded to the Forest Commission.

6. Another experiment made by Mr. Ozanne, at the instance of the Forest Commission, had the useful result of proving that the sugar-boilers of Bassein in the Thána District might effect much economy in the use of fuel by a slight change in their present practice which necessity has already taught in parts of the Presidency where fuel is more expensive.

7. Mr. Ozanne's paragraphs relating to arboriculture have been read by the Governor in Council with interest. He has shown good grounds for believing that the babul tree ought not to be grown in the immediate vicinity of cultivation. Any sweeping modification, however, of the standing orders regarding road-side trees, in the way suggested, appears to be inexpedient, though Government will be prepared to modify those orders in particular cases on due cause being shown by the local Revenue Officers.

8. The Agricultural Statistics now inserted in the report for the first time add considerably to its value. The attention of Collectors is especially called to these statistics and their remarks invited on any apparent inaccuracies or deficiencies. A marked feature in the statistics for the year under review is that the more and the less trustworthy ones are kept quite distinct.

9. Mr. Ozanne deserves credit for his valuable report no less than for the zeal and energy with which he has as usual conducted his onerous duties. Government notice with pleasure the commendation bestowed on his Assistant Mr. Bhimbhái Kirparám and the two Superintendents referred to in paragraph 2 of the report.

J. De C. ATKINS,
Under Secretary to Government.

To

The Director of Agriculture,
The Superintendent, Government Experimental Farm at Bhadgaon in Khándesh,
The Superintendent, Government Experimental Farm at Hyderabad in Sind,

The Commissioner in Sind,
The Commissioner, N. D.,
The Commissioner, C. D.,
The Commissioner, S. D.,
All Collectors, including the Collectors and Deputy Commissioners in Sind,
The Survey and Settlement Commissioner,
The Accountant General,
The Conservator of Forests, N. C.,
The Conservator of Forests, S. C.,
The Conservator of Forests, Sind Circle,
The Superintendent, Botanical Gardens, Poona,
The Military Department of the Secretariat,
The Political Department of the Secretariat,
The Public Works Department of the Secretariat, Irrigation,
The Editors' Table, Bombay,
The Editors' Table, Poona, *care of* the City Magistrate, Poona,
The Editor and Proprietor, *Dhárwár Vritt*, Dhárwár, for his own use and for circulation to other editors of newspapers in Dhárwár,
} With copies of the report.

The Secretary of State for India,
The Government of India.
} By letter.

# ANNUAL REPORT

OF THE

# DIRECTOR, LAND RECORDS AND AGRICULTURE,

# BOMBAY PRESIDENCY,

FOR THE YEAR 1886-87.

Bombay:
PRINTED AT THE GOVERNMENT CENTRAL PRESS.
1887.
[Price—7 Annas.]

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No. 2061 OF 1887.

FROM

E. C. OZANNE, ESQ.,
Director, Land Records and Agriculture,
Bombay;

To

T. D. MACKENZIE, ESQ.,
Acting Chief Secretary to Government,
Revenue Department,
Bombay.

*Poona, 10th November 1887.*

SIR,

I have the honour to submit the Fourth Annual Report of the Department of Land Records and Agriculture. The office of Director was held as follows :—

| Name of Officer. | From what date to what date. | Total period. | |
|---|---|---|---|
| | | M. | d. |
| Mr. E. C. Ozanne ... ... | 1st November—4th December 1886 ... ... | 3 | 18 |
| | 18th—31st March 1887 ... ... ... | | |
| | 1st June—1st August ... ... ... ... | | |
| Mr. J. A. Baines ... ... | 5th December—17th March ... ... ... | 5 | 13 |
| | 1st April—31st May ... ... ... ... | | |
| Mr. W. P. Symonds ... | 2nd August—31st October ... ... ... | 3 | 0 |
| | | 12 | 0 |

Mr. Baines acted while I was officiating Survey Commissioner and Mr. Symonds while I was on privilege leave.

2. The Director was present at the Nagar Cattle and Agricultural Show (4th–6th November). Short tours were made in Bijápur (29th November–4th December and 11th–14th January) and Dhárwár (7th–10th January). He attended the Nadiád Agricultural Show (25th–31st January) and the Chinchli Show in February. In May a visit to the Ratnágiri District (13th–17th) was undertaken in connection with the introduction of the Circle Inspector staff. A second visit was paid to Dhárwár (28th June–2nd July) and the Bhadgaon Farm was inspected between the 14th to 19th July by the Director in company with Mr. Wallace, Professor of Agriculture at the Edinburgh University.

3. The constitution of the head-quarter establishment has remained unaltered. The deputation of Mr. Krishnaráo Narsinh on special duty in compiling analytical accounts of districts ceased with his appointment (November 1886) as District Inspector, Bijápur. The Department has lost a most valuable officer in the death on 27th August of the senior Superintendent, Mr. Vaikunthrám Manmathrám Mehta, B.A. Ráo Bahádur Bhimbhái Kirpárám was absent on privilege leave (16th April–15th July 1887) owing to illness. He has maintained a high standard of efficiency in the office and has gained still further experience in the special work of the Department.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

4. The constitution of the special staff—organized under the auspices of the Agricultural Department—has been fully described in former reports. Its extension to all districts of the Presidency will be gradually effected. No progress in this direction has, however, been made during the year owing to the financial pressure which has even precluded the transfer of the custody of the survey record in districts where the revised measurement and classification of the Survey Department are completed.

The internal organization of the Agricultural Department itself has, however, to record some gain during the period under report. The pay of District Inspectors has been raised to Rs. 150, the pay of the lowest grade of Mámledárs. But their status has yet to be equalized with that of Mámledár by due provision for promotion. This will be a matter of time, but it is essential.

The position of the Assistant to the Director in charge of two or more districts has been more defined. The designation of the post will probably be "Divisional Superintendent." There is as yet only one officer holding this position. It has been decided that he shall be treated as the Collector's Assistant in technical matters connected with survey and settlement.

5. The following tables exhibit the work of the inspecting staff, and the supervision exercised over the Circle Inspectors by the officers of the Agricultural Department.

**A.—Annual Inspection (November to February) by Circle Inspectors.**

| District. | Crop Inspection. | | | | | | | Waste Inspection. | | | | | Boundary-mark Inspection. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total number and area of occupied Survey Numbers. | | Total number and area of inspected Survey Numbers. | | Number in which entry in Village Form III. | | | Number of Waste Numbers other than Forest. | Total number and area of inspected Waste Numbers. | | No. in which unauthorized cultivation or other encroachment detected. | | Number of Marks inspected. | | Number of Marks found in disrepair. | |
| | No. | Area, Acres. | No. | Area, Acres. | Found correct. | Corrected. | Found blank and filled in. | | No. | Area, Acres. | Reported by Village Officers. | Not reported by Village Officers. | In Occupied Numbers. | In Waste Numbers. | Shown in Village Form III. as in disrepair. | Not shown in Village Form III. or shown in repair. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| Dhárwár .. | 171,551 | 2,086,151 | 14,254<br>8·31 | 122,081<br>5·85 | 4,278<br>30 | 3,934<br>27·6 | 6,042<br>42·4 | 10,539 | 2,919<br>27·7 | 30,315 | 2 | 33 | 161,671 | 42,059 | 5,624 | 57,863<br>91·14 |
| Bijápur .. | 164,650 | 2,740,713 | 17,554<br>10·66 | 237,560<br>8·67 | 5,214<br>29·7 | 7,807<br>44·48 | 4,533<br>25·82 | 14,574 | 2,450<br>16·81 | 39,867 | 7 | 33 | 189,439 | 30,443 | 8,546 | 61,533<br>87·8 |

*Crop Inspection.*—In Dhárwár 8·31 per cent. and in Bijápur 10·66 per cent. of the total number of occupied survey numbers were covered by the inspection. This test is hardly sufficient, more especially if the area and not the survey numbers, is considered.

As to the character of the work done by the Circle Inspectors, the Divisional Superintendent, Mr. Price, who was on tour from the 13th November till the 12th March, engaged in checking the work, states that he visited 13 villages of 10 circles in Dhárwár and 10 villages of 9 circles in Bijápur, and that he found the work of estimating the crop areas fairly good.

The work done by the village officers was inferior. The table shows that correct entries were found in only 30 per cent. of numbers in either district. Corrections are only permitted when either a crop is altogether omitted or a wrong crop entered, or when the estimate by the Inspector differs by 25 per cent. from that recorded in the village forms. It would clearly be unwise to insist on corrections in all cases of difference between the estimates. The object is to ensure that the work is done in the field by the Kulkarnis and not in the chávdi; and to gradually educate them to more careful registration.

The figures of column 8 can only be accounted for by delay in commencement of the annual inspection by the village and by the absences of the Kulkarnis. Mr. Price says:—"Crop inspection was commenced by the Circle Inspectors in both districts generally in the first week in November. The Kulkarnis throughout both districts did not in most villages commence their work till the end of that month and in some villages till the middle of of December. Therefore much of the work done by the Circle Inspectors was not a check on the Kulkarnis' work as it is intended to be. However the Kulkarnis must have benefited by seeing the methods adopted by the Inspectors to arrive at a fair estimate of the areas under different crops, for every endeavour was made to insist on these men accompanying the Inspectors. The reasons generally given for the Kulkarnis not having commenced crop inspection on the appointed date, were that they were in attendance at the Mámledárs' offices for the preparation of the Jamá-

bandi papers and for having the different village forms explained to them as these had (by reason of the introduction of the Revised Manual) newly undergone material change. The latter reason cannot be put forward again. But the other, if not a valid reason, calls for the attention of the Collectors, as it may again be urged either as an excuse for delay in commencement or for discontinuance in the middle of the inspection period."

Mr. Price's report will be sent to the Collectors for consideration. It will be possible in future for the Divisional Superintendent to submit his report through the Collectors.

*Waste Inspection.*—Of the total waste numbers 27 per cent. in Dhárwár and 17 per cent. in Bijápur were inspected by the Circle Inspectors. It is worth noticing that in this inspection 33 new cases of unauthorized cultivation in Dhárwár and the same number in Bijápur were brought to light by the Circle Inspectors, the Kulkarnis having reported only 2 cases in Dhárwár and 7 in Bijápur. The check has been nearly sufficient in Dhárwár. In Bijápur the inspection of waste was made in two tálukás by the regular staff and not by the Circle Inspectors. Hence the low percentage. An annual check covering the whole area of unoccupied waste is not necessary, for that would be doing the work of the village Kulkarnis. If the whole area of waste is covered in 4 years, the guarantee against unauthorized cultivation will be adequate. The rules provide that of the survey numbers selected for the check inspection, one quarter should be equally chosen from (1) cultivable waste and (2) numbers set apart for special or public purposes. Where the area of waste is large, it is intended that the proportion of waste inspection should be extended.

*Boundary-Mark Inspection.*—The Inspector is required to examine all the marks of numbers of which the crop or waste inspection is made. Of the total marks found in disrepair 91 per cent. in Dhárwár and 87 per cent. in Bijápur were brought to notice by the Circle Inspectors. The village inspection of marks is notoriously faulty. It is an irksome work and yet most important. Mr. Price has noticed a tendency which it is necessary to check at once, on the part of a few Circle Inspectors to enter marks as in disrepair which are really in fair repair. Even making allowances for this evil tendency, it cannot be held that the work of the village officers is other than deplorably bad, and the necessity of a strict supervision such as that now provided for is clear.

Some recent remarks by the Collectors on the village field inspection may be aptly quoted.

**Mr. Ebden (Bija'pur)**—

"All this kind of work, so far as it is done, is in all probability generally carried out in the chávdi, and it is impossible for the overworked and small revenue establishments to check it to a sufficient extent to ensure its proper performance."

**Mr. Spence (Dha'rwa'r)**—

"There is no doubt that the work of the village accountants in preparing agricultural and vital statistics is now tested at the proper time and in an intelligent way—a thing which was never done before."

**B.—Complete Boundary-mark Inspection (March to May).**

| District. | Number of Villages in which inspection of Boundary-marks was done. | Details of Column 2. | | Total number of Survey Numbers of which inspection | | Total number of Marks found out of repair and redundant by Rule 7, Chapter V. | |
|---|---|---|---|---|---|---|---|
| | | Number of wholly inspected Villages. | Number of partially inspected Villages. | is done. | is yet to be done. | Number of Marks repaired and removed. | Number of Marks remaining to be repaired and removed. |
| 1 | 2 | 3 | | 4 | | 5 | |
| Dhárwár ... ... ... | 43 | 6 | 37 | 6,173 | 11,717 | 11,157 | 9,912 |
| Bijápur ... ... ... | 37 | 12 | 25 | 6,110 | 5,831 | 20,056 | 5,004 |

These districts were taken over by the Agricultural Department after a lapse of a long period since the departure of the Survey and the first necessary step is to make a thorough examination of every field in order, to put in repair every mark in disrepair, to erect new marks where necessary, to remove redundant marks, to settle disputed marks, and to correct wrong marks. The progress is slow. The work is difficult and there is a great reluctance on the part of the people to assist the work by their labour. The Inspectors are not all fully trained.

C.—Check Census of Population and Live-Stock—(July and August).

| Villages with Population. | Dhárwár. | | | Bijápur. | | |
|---|---|---|---|---|---|---|
| | Number of Villages. | Proportion of Entries checked. | Number of Items corrected. | Number of Villages. | Number of Entries checked. | Number of Items corrected. |
| Under 500 ... ... ... | 621 | Whole. | 23,681 | 581 | 30,529 | 17,281 |
| Over 500 and below 1,000 ... | 264 | ½ | 13,446 | 231 | 17,974 | 13,439 |
| Over 1,000 ... ... ... | 188 | ¼ | 16,387 | 156 | 18,154 | 11,064 |
| Total ... | 1,073 | ... | 53,514 | 968 | 66,657 | 41,784 |

The rule is that in villages with a population under 500, all the entries in Village Form XIII should be checked; in those with a population over 500 but under 1,000, half, and in those where the population is over 1,000, one-quarter of the entries should be checked.

This valuable check of the work of the kulkarnis dates from the establishment of the Circle Inspectors. It was not even nominally attempted before.

D.—Statement showing the Measurement Work done by the Circle Inspectors.

| No. | Classes of Cases. | Dhárwár. | | | | Bijápur. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Arrears on 30th September 1886. | New cases. | Disposed of. | Arrears on 30th September 1887. | Arrears on 30th September 1886. | New cases. | Disposed of. | Arrears on 30th September 1887. |
| 1 | Partitions of land under decree of Court ... ... | 6 | 33 | 38 | 1 | 2 | 16 | 18 | ... |
| 2 | Subdivisions on application of occupants duly sanctioned ... ... ... | 1 | 17 | 8 | 10 | ... | 8 | 6 | 2 |
| 3 | Disputes necessitating re-measurement of fields ... | 15 | 54 | 34 | 35 | 9 | 18 | 20 | 7 |
| 4 | Disputes requiring fixing of marks by the field books.. | 61 | 87 | 79 | 69 | 17 | 95 | 72 | 40 |
| 5 | Encroachments ... ... | 80 | 349 | 230 | 199 | 25 | 124 | 117 | 32 |
| 6 | Measurement of alterations caused by alluvion and diluvion ... ... ... | 15 | 40 | 24 | 31 | 26 | 59 | 61 | 24 |
| 7 | Measurement of land required for public purposes— | | | | | | | | |
| | (a) Extramural burial grounds ... ... | 29 | 66 | 65 | 30 | 12 | 13 | 21 | 4 |
| | (b) Tanks ... ... | 20 | 30 | 28 | 22 | ... | 2 | 2 | ... |
| | (c) Roads ... ... | 11 | 24 | 21 | 14 | 10 | 24 | 31 | 3 |
| | (d) Dharmashálás and other public buildings.. | 9 | 5 | 8 | 6 | 1 | 6 | 4 | 3 |
| 8 | Measurement of land for building-sites ... ... | 16 | 99 | 86 | 29 | 7 | 100 | 87 | 20 |
| 9 | Re-classification of survey numbers ... ... ... | 3 | 6 | 8 | 1 | 1 | 3 | 3 | 1 |
| | Total ... | 266 | 810 | 629 | 447 | 110 | 468 | 442 | 136 |
| 10 | Miscellaneous ... ... | 83 | 1,600 | 1,467 | 216 | 36 | 230 | 210 | 56 |
| | Grand Total ... | 349 | 2,410 | 2,096 | 663 | 146 | 698 | 652 | 192 |

Excluding miscellaneous cases which have much increased in Dhárwár owing to the additional duties imposed on the Circle Inspectors in that district under the circumstances detailed in paragraph 9 of the last report, a comparison of the figures of 1885-86 and 1886-87 shows that the measurement cases have increased from 362 to 810 or 124 per cent. in Dhárwár and from 332 to 468 or 41 per cent. in Bijápur. This increase is particularly noticeable under the head of Encroachment, where the cases show a rise from 130 to 349 in the former and from 84 to 124 in the latter district. This is due to the stricter and more systematic inspection now conducted by the Circle Inspectors. The month of October is set apart for the disposal of work not disposed of in the busy season where set duties claim prior attention. The statement cannot include the work of October and so the arrears appear large.

6. An irregular, though continuous check is exercised by the Circle Inspectors over the registration of deaths and births, and of the statistics of small-pox and cholera. The result of the supervision thus exercised is reported direct to the Deputy Sanitary Commissioner and considered by him. It is not possible therefore for me to give detail of the extent of the check taken. I have every reason to believe that the officers of the Sanitary Department appreciate the assistance they receive and I have had no complaint of neglect or bad work.

7. So far I have detailed the year's working of the Circle Inspectors in their capacity of supervisors of the village accountants. They are also the compilers of the Táluka Forms which summarize the statistical information checked by them in the field or in the village. The táluka returns for 1886-87 :

No. 33. Boundary-marks;
„ 34. Population and live-stock;
„ 35. Sources of water-supply;
„ 36. Crops;
„ 36A. Irrigation;

were prepared in the Mámledárs' offices by the Circle Inspectors with occasional supervision by the District and Assistant District Inspectors over and above that of the Mámledár. It may be stated here that the district compilations are similarly made by the District Inspector under the supervision of the Collector.

8. The Circle Inspectors are supervised by the Mámledár, their immediate superior; but their work is also subjected to a systematic and careful check by the District and Assistant District Inspectors of the Department of Land Records and Agriculture. The following table shows the test work done by these officers.

**E.—District and Assistant District Inspectors' Work.**

| District. | Crop Inspection. | | | | Waste Inspection. | | | Boundary-mark Inspection. | | Correspondence. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total number and area of occupied Survey Numbers inspected by Circle Inspectors. | | Number and area of occupied Survey Nos. tested by District and Assistant District Inspectors. | | Total number of Waste Nos. excluding Forest, inspected by Circle Inspectors. | Number and area of Waste Nos. tested by District and Assistant District Inspectors. | | Number of Marks inspected by District and Assistant District Inspectors. | | | |
| | No. | Area, Acres. | No. | Area, Acres. | | No. | Area, Acres. | In Occupied Nos. | In Waste Nos. | Inward Nos. | Outward Nos. |
| Dhárwár. | 14,254 | 122,081 | 153 | 1,291 | 2,919 | 9 | 21 | 2,301 | 123 | 2,653 | 2,062 |
| Bijápur | 17,554 | 237,560 | 282 | 4,260 | 2,450 | 26 | 491 | 3,514 | 278 | 2,201 | 2,138 |

The District Inspector is responsible for the work of the Head-quarter Office in charge of the Survey Records. The work of this office is heavy as the following table will show :—

F.—Head-quarter Office Work.

| District. | Number of cases received necessitating correction in Survey Records. | Number of Akarbands, Maps, and Field Books corrected. | Number of Extracts from Field Books sent to Circle Inspectors. | Number of Extracts from Survey Books supplied to Revenue Officers and Petitioners. | Number of Maps supplied to the Village Officers. | Correspondence. | |
|---|---|---|---|---|---|---|---|
| | | | | | | Inward Nos. | Outward Nos. |
| Dhárwár ... | 118 | 679 | 568 | 140 | 97 | 2,042 | 299 |
| Bijápur ... | 127 | 1,380 | 171 | 10 | 194 | 1,676 | 464 |

9. Mr. Price, Divisional Superintendent, has actively supervised the whole of his charge. He has given full attention to all portions of his duties and has taken the opportunity, while supervising the complete boundary-mark inspection, to study the best method of relieving the rayats whose lands border on nálás and rivers from an excessive burden of constant repair of field marks. He has further given valuable instruction to the District Inspectors and their Assistants calculated to improve the quality of their supervision. He commends the work of all these officers and specially notices the value of the supervision over the Inspectors exercised by Mr. FitzMaurice and the District Deputy Collector of Bijápur. This assistance is very valuable. But he adds, "I have received no reports regarding the tests of the Dhárwár Inspector's work by the Assistant and Deputy Collectors nor have any reports come to me either from the Dhárwár or the Bijápur District Mámledárs regarding tests taken by them." It is desirable that the officers of the Revenue Department should work hand in hand with those of the Department of Land Records and Agriculture and constant intercommunication is the best way of securing this accord. More I need not say. The officers of the Department of Land Records and Agriculture are appointed to aid and assist the regular revenue officials and it is the extent and quality of this assistance which it is my duty to record in this report.

From 19th February to 8th March Mr. Price was engaged in enquiring into the allegations of over-assessment of lands watered by the Ilkal Nála in the Hungund Táluka of Bijápur. His work in this respect was very valuable and has received due recognition from Government in the final orders passed (Government Resolution No. 6456, dated 24th September last, R. D.). His recommendations were cordially accepted by the Survey Commissioner and are now being carried out with the sanction of Government.

Mr. Price has fully maintained the very high character which he brought to the Department with his appointment.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE

10. I am not yet able to present any accomplished work on this head to Government. But a great deal of attention has been paid to the subject and much material for the district accounts has been collected and collated. District maps to accompany the accounts are in course of preparation at the Photozincographic Office. There is difficulty in fixing the form in which the accounts should be presented, but on this point I have decided that an atlas of the Presidency containing Presidency and district maps with tables of statistics and other statistical information required by the Famine Code will be the most suitable and generally useful form. The loss of the services of Mr. Krishnarao Narsinh (*vide* supra para. 3) has been felt.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

11. This head of the report was fully dealt with last year and need not be further referred to.

## IV.—MEASURES OF PROTECTION, INCLUDING

*(1) Fodder Reserves and Arboriculture.*
*(2) Extension of Communications.*
*(3) Irrigation.*

These subjects belong more properly to other departments than that of Land Records and Agriculture in Bombay.

### *(1) Arboriculture.*

**Babhul Plantations.**

12. Satisfactory progress has been made in carrying out the sanction of Government under this head accorded in Government Resolution No. 6282, dated 5th August 1884, at the instance of this Department. In Násik an area of 45 acres, assessed at Rs. 9¼, thrown out of cultivation by the spontaneous growth of brushwood jungle has been handed free of occupancy right to a resident of the táluka (Sinnar) for bábhul planting. In Poona (Bhimthadi) a field of 9½ acres, assessed at Rs. 2½, has similarly been granted, but rent-free for 10 years. It already has a fair growth of bábhul and is well suited for a plantation. In Hyderabad in 2 villages, land aggregating 12½ acres, assessed at Rs. 37, has been taken up for bábhul cultivation.

In all there are now 4 plantations in Násik, 1 in Poona and 3 in Hyderabad. This is a fair commencement, but the subject is important and merits fuller attention from District officers. It has been taken up with energy in Gujarát. Mr. Khareghát, Assistant Collector of Ahmadabad, has submitted a full report which shows that much land, both in river-side villages and others, is eminently fitted for bábhul reserves. He proposes that such lands which are unoccupied should be freely granted on condition that the grantees should receive from ⅓ to ¼ the sale-proceeds of fellings and fallen wood, and further reports that many rayats are ready to accept these terms. The Commissioner, Mr. Sheppard, at the instance of Government, has drawn up rules for the conduct of his Collectors. These are briefly as follows:—that the Collector should encourage private enterprize in this direction. Assessed or unassessed waste in the neighbourhood of rivers and nálás should be freely granted provided the grantee grows only bábhul. The grass and the pods will belong to him. The proceeds from sale of felled or fallen trees should be shared between the grantee and Government. Sanads should be issued. If land, now unfit for cultivation, is by the growth of bábhul brought into condition for tillage, the trees may be felled and sold and the land granted under the Survey tenure to the successful planter without any charge for occupancy right.

These rules are excellent, but the limitation to lands near nálás and rivers appears unnecessary, for as Mr. Khareghát shows other lands near village sites are often most suitable. Further, there appears no reason why concessions should not be given to occupants willing to devote occupied land to bábhul plantations. Lastly, the provision that land may be cleared of good bábhul seems to require modification. The formation of bábhul reserves in set areas to supply fuel and wood for agricultural implements is the main object of the resolution. Such reserves will free the borders of cultivated lands from destructive and pernicious growth of bábhul.

**Trees on borders of cultivated land.**

13. Mr. Bulkley has informed me that in the opinion of experienced men in Gujarát the trees of that Province should be graded as follows in respect to the injury they cause by shade to crops:

(1) Woodapple; (2) Tamarind and Mango, (3) Bábhul, and (4) Ráyan.

The order is slightly different from that of Khándesh (last Report, para. 29). Such differences no doubt exist. I wish here to notice that my remarks regarding the harm done especially by bábhul shade were not intended to refer to irrigated crops. I say this because some objection was taken to them in Sind where bábhul grows freely and does not injure irrigated areas.

Mr. Woodrow's observation corroborates the arguments I adduced last year. One of his farm fields borders on a road lined with "Ficus indica." The late crop of Sorghum saccharatum was excellent, where the avenue of trees was imcomplete, but very poor in the influence of the shade.

"Where the avenue was open the breeze penetrating carried away the heat radiated from the soil during the evening and the still air following was permitted to deposit its vapour as dew. Where the avenue was complete, the air was kept above dew-point and the crop suffered from want of this important source of moisture. I think that cereal crops are as a rule injured by shelter, but that bananas, turmeric, ginger, arrowroot, and other members of the natural order scitamineæ, are improved. The practical result of this is as stated by Mr. Ozanne. The boundaries of fields should not be looked to for a supply of timber, but instead a separate space near each village should be allotted for its growth."

The crops noticed as not liable to injury by shelter are, I may remark, irrigated crops, not specially dependent on dew.

(3). **Irrigation.**

14. Ráo Bahádur Becherdás Veháridás of Nadiád has introduced a new pattern of double mot. It is somewhat complicated in structure and expensive but its working is simple. It was erected by a village carpenter. The outturn is larger by 50 per cent. than that of a single mot worked on the same well. The gain is secured by saving of time in turning.

Messrs. Sudgen and Co. in Kaira have undertaken to erect steam pumps on the river Vátrak to raise water for irrigation. The proposals are under consideration, inasmuch as it is necessary in granting sanction to safeguard the rights and interests of all parties, Government included. But there is a prospect of much benefit in the increase of irrigated area, for if financially successful, the venture will invite imitation and the steam pump may oust the *dhekudi*.

*Drainage schemes.*—Of the Ahmadabad and Broach drainage schemes, want of funds has permitted only the taking up of the Viramgám scheme, for which a sum of Rs. 30,000 has been provided in the Budget. This is perhaps the most pressing of the valuable improvements recommended to Government (last Report, para. 36).

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

### A.—Experimental Farms, Bhadgaon.

General financial results.

15. The annual reports were distributed in September and October. I visited the Bhadgaon Farm in July accompanied by Professor Wallace of the Edinburgh University and stayed 5 days. Mr. Stormont, the Superintendent, was on leave from 1st April till the end of October. The duties of his office were efficiently conducted by the Assistant Superintendent, Mr. Dadina.

The season was the most favourable of the past decade, especially for cotton. In the non-experimental area 436½ acres, assessed at Rs. 624, were cropped at a cost of Rs. 4,400. The value of the produce was Rs. 6,131, thus giving a net profit of over Rs. 1,000 after full deduction of the cost of cultivation and assessment. The assessment shows a percentage of 10 on the gross and of nearly 40 on the net yield. If instead of persevering with attempts to keep up the growth of exotic cotton, the more remunerative indigenous variety had been sown the profit would have been more than trebled. The area actually devoted to experimental cultivation was 21 acres. The produce worth Rs. 354, cost only Rs. 545. If the full pay of the assistant is charged against this area, the net cost of the experiments of the year comes to Rs. 1,000.

The up-keep of the valuable herd of Mysore cattle necessitated a considerable outlay. Taking this into account and adding the pay and travelling allowances of the Superintendent (Rs. 5,160), which, though debited to the farm, is rather chargeable against general agricultural enquiry, and on the other hand taking credit for a very moderate valuation of the live stock, the farm cost Rs. 6,250.

16. I have separately reviewed the Farm Report, written by Mr. Dadina, and shall only here place on record, as directed by the latest ruling of the Government of India, the experimental results in a succint form.

**Cotton.**

Exotic cotton not profitable in Khándesh.

It has now been demonstrated that it is unwise to force exotic American cotton on the Khándesh cultivator. In carefully measured plots the indigenous variety gave a crop worth Rs. 30 per acre, whereas the exotic crop was worth

only Rs. 6. The season was equally favorable to both. These results were fully corroborated by the cropping of large areas (Exotic 143, Indigenous 26½ acres) on the general farm. Still in certain light soils the exotic variety may be cultivated with greater profit.

Exotic seed better acclimatized in Dhárwár.

Next, the year's working shows that newly imported seed of the American varieties, of which four kinds were tried, cannot be successfully acclimatized on the soil and in the climate of Khándesh. The highest yield obtained was 15 lbs. clean cotton per acre. On the other hand, similar exotic varieties, acclimatized in Dhárwár several years ago, gave *on the average* 30 lbs. The new seed was successfully sown on large areas in Dhárwár and on the average yielded there 45 lbs. per acre; in one village giving as much as 80 lbs. It may be taken as demonstrated that Dhárwár is the more favourable locality for acclimatizing imported seed, and that if there is a demand for the seed for Khándesh, it should be obtained from Dhárwár, and not provided by keeping large areas in Khándesh under exotic cotton yearly cultivated either at a loss, or with insignificant profit.

1. Louisiana, (Boyd's Prolific.)
2. Memphis.
   (a) Upland.
   (b) Allen.
   (c) Bruder.

The present low price of long-stapled cotton gauged.

A test shipment of saw-ginned American, grown on the farm from seed acclimatized long ago in Dhárwár, was made to test the quality of the staple. The shipment of 20 full pressed bales was sufficient to gauge the home market. The result was proof (1) that the staple has degenerated and that new seed is necessary, for the cotton only fetched 4¾*d.* per lb., and (2) that the price offered locally for American cotton, grown in Khándesh, is not lower than the market price—for all charges being taken into count, the net profit was Rs. 35 less than if the cotton had been sold at the farm.

*Results in cultivation.*

1. Cotton mixed with other crops better than cotton alone.
2. The local practice of ploughing up poor cotton and taking a late crop is not justified.

Respecting the cultivation of cotton and the merit of the local expedient of intersowing occasional rows of jowári or tur, experiments made in the season under report prove that the cultivator even in a good cotton season secures a larger profit from the mixed sowings than from cotton alone, and that in a year unfavourable to cotton he ensures a fair return. But on the other hand the experiments do not show a similar merit in the local practice of ploughing up poor cotton and following with a late crop. It is better to intersow gram or linseed between the rows of poor cotton.

Cotton ginning by steam.

The crop was ginned by steam. The cost was per 240 lbs. Rs. 1-8-0 as against Rs. 3-14-5 of the country hand gin.

**Wheat.**

Tillage as manure.

The Lois Weedon (alternate fallow) system of cultivating wheat has reached its third season in dry cropping and an irrigated set of plots has been laid out. The yield on the half-sown plot is now the best. No manure is used. Seed is saved. The cost of labour is slightly greater, but if by extra labour a saving in manure and seed can be effected, the benefit of the system will be demonstrated. There is sufficient experimental success now to justify trials on a large scale in whole fields.

Colour and consistency of wheat.

This experiment is also in its third year. Further proof is afforded of the gradual but sure hardening of the soft varieties and of the change in colour, though the latter alteration is far slower. Incidentally the results obtained in this series of plots are valuable. The local wheats are hard, but the Akola soft red gave the highest crop on the irrigated fields and the Jabalpur soft white the best dry-crop. Even though change of seed may partly account for this unlooked-for result, which must still be carefully scrutinized by continued experiment, it is strange that the benefit of change was not also marked in the imported Gujarát hard varieties. Further comment will be premature.

Foreign wheat.

The pedigree seed wheat tried for a second time at the command of the Secretary of State, but against my judgment, has again utterly failed, and it may be said not only in Khándesh but in Sind, Gujarát, and Poona. The deduction is that the interchange of seed may be carried too far, or that the vitality of Messrs. Oakshott & Co.'s pedigree seed has been impaired by want of attention to the prevention of partial germination in transit. India has no need of pedigree seed from abroad. Her own wheats are excellent. Nevertheless, occasional experiment is not to be abandoned. It would be a great benefit if a rust-proof variety other than the locally known spelt could be discovered.

**Jowari.**

Pickling Jowari seed.

Pickling experiments proved nothing as there was no smut even on unprotected crops.

Life history of Striga hirsuta.

This crop is, with maize, often greatly injured by a vegetable parasite—Striga hirsuta. One-third of the crop of the general farm was devastated. The experiments to study the habits of the parasite have been continued. Plots sown with maize followed by gram and with jowári were attacked, though in the case of maize the parasite did not show till late. It was ploughed in before the gram was sown and did not reappear. In the jowári plot it held sway in spite of all efforts to keep it down. In another plot, last year sown with jowári, when the parasite was plentiful, cotton was grown. No plant of the parasite appeared. Cotton is supposed to keep it in check. Sub-soiling was tried as a preventive in another plot. Gram was the crop taken. The result was very favorable, though not conclusive, because the parasite does not feed on gram. Jowári should be tried after sub-soiling. Horse-dung is locally supposed to favour the parasite. * The result did not in any way support the supposition, for though jowári was sown, it was uninjured.

**Sugarcane.**

Manure for cane.

It formed the basis of a very careful experiment in manuring. Professor Cooke's patent phosphatic manure, alone and mixed with farm-yard manure, and used also as a top dressing after a treatment with farm-yard manure, was pitted against ordinary farm-yard manure and sheep-dung. Damage by white ants and flooding vitiated the experiment. Unless, however, the patent manure can be supplied at a much lower figure, it can have no chance. The unfortunate failure of this test is regrettable.

Cost of cultivation.

An acre plot of cane was carefully grown in order to gauge the cost of cultivation and the profit. 4,600 seed canes cut into sets weighing 3,892 lbs. produced 1,968 lbs. of jagri and 10,952 seed canes, weighing 9,270 lbs. The cost of cultivation, including all charges for water from the canal, manure and labour, amounted to Rs. 132. The crop fetched Rs. 185, or a net profit of Rs. 53 per acre.

Sorgho sugar.

*Sorgho* was grown for an experiment in sugar making. Notwithstanding the assistance of an apprentice from the Cawnpore farm and the new evaporator recommended by that farm the result was very poor.

Arrowroot.

*Arrowroot* grows well. The tops as well as sets from the rhizomes have now been sown. The former took root well.

Ensilage.

*Ensilage* has been a success. The silage cost about 7 annas per cwt. The cattle were fed on it from January till April and were in very fine condition. The silos are cheap and within the means of the ordinary cultivator. Similar results with silage were obtained on the College of Science Farm, by Mr. Woodrow, who has fully reported results. His silo cost Rs. 86 and has a capacity of 4,000 cubic feet. The cattle—40 head—were fed for 4 months with benefit—receiving no other fodder.

Cattle.

The Mysore herd has been renovated by the purchase of 25 new animals, selected on the spot by Mr. Stormont, from the Government depôts in Mysore. The cost Rs. 952 had to be provided by sales of old stock. Very fine prices varying from Rs. 60—90 per head were secured for good farm-bred animals of the same breed. In all 30, good and bad, animals fetched Rs. 1,130. The condition of this herd is now very satisfactory. It will not be largely increased but yearly sales will recoup the cost of keep and tend to further improvement of the cattle of the neighbourhood. The aim of the Superintendent is to produce a good type of plough bullock and experiments have fully demonstrated the necessity of keeping the herd pure. The Chief of Jath and the Kolhápur State took advantage of Mr. Stormont's deputation to Mysore to introduce new blood into their Mysore herds.

Nothing of note has taken place regarding the flock which chiefly consist of Dumbas from Sind crossed with the local breed. It consists of 215 sheep and 22 goats.

Machinery.

The steam thresher did good work for the farm. The engine was utilized to drive cotton gins. The McOnie horizontal sugar-cane mills earned Rs. 148 by hire after crushing the farm cane. An unpaid assistant on the farm has made a venture on his own account. He manufactured four mills on the McOnie muster and took them to the cane tracts of Gujarát. As yet he has not met with success. The farm had to wait for several years before the mills became popular. The Stormont plough continues to do good work, though in Professor Wallace's opinion it is not equal to the native plough for ordinary tillage. It is, however, of great use in breaking up grass-bound land.

**The Sind Farm (Hyderabad).**

17. Mr. Strachan has been in charge during the year. He made a visit to Poona and the Bhadgaon Farm in the hot season to compare notes with the Superintendents of the other Government farms.

The general area of 44½ acres was cropped at a cost of Rs. 2,147. The crop was worth Rs. 2,187. The experimental plots covered 15¼ acres. The cost was not excessive (Rs. 1,020). The produce fetched Rs. 877. Including the share of the Superintendent's and Assistant Superintendent's pay debitable to the farm, debiting the share of expenditure fairly debitable to permanent improvements, and all incidental expenditure the farm cost Rs. 4,680. But a sum of Rs. 7,400 was realized from the sale of the occupancy right of the old farm at Salaru. This must be treated as capital for the new farm now in existence for 5 years, the clearance and reclamation of which has cost more than that sum.

Without taking this item into account the two Government farms at Bhadgaon and Hyderabad have cost Rs. 11,000 in 1886-87 against Rs. 10,100 in the previous year. The increase is all in the Sind Farm where the season was not favourable.

The variety of experiments conducted is not large and some are not carried out with accuracy, owing to misunderstanding of the object aimed at.

**Selection of seed.**—The bajri experiments have reached their 12th year.

| | 1882-83. | 1883-84. | 1884-85. | 1885-86. | 1886-87. |
|---|---|---|---|---|---|
| | Grain. | Grain. | Grain. | Grain. | Grain. |
| No. I. selected ... ... ... | 1,171 | 1,527 | 922 | 1,710 | 1,730 |
| „ III. „ ... ... ... | 1,258 | 1,282 | 947 | 2,308 | 1,305 |
| „ IV. „ ... ... ... | 1,389 | 1,307 | 995 | 1,574 | 1,200 |
| Mixed ... ... ... ... | 863 | 1,765 | 1,085 | 2,144 | 1,135 |
| Bearded bajri... ... ... ... | ... | 1,510 | 815 | 1,615 | 1,580 |
| Bazar seed ... ... ... ... | ... | ... | 642 | 1,562 | 885 |

Nos. I, III and IV were selected in 1876-77. The bearded bajri in 1883-84. The mixed is made up of Nos. I, III and IV. The benefit of the selection continues.

The bearded bájri is a variety different from the others. Among these since 1882-83 the variations in yield have been marked, but each kind has in one year at least headed the list. Taking the average there appears nothing to choose between them. All however continue to show better results than the unselected seed. The Superintendent may abandon the experiment as now conducted, but he will continue to grow duplicate plots from bázár seed and from what he considers the best strain of the selected varieties, to show the gradual improvement by selection.

See para. 46 my Annual Report for 1884-85.

To guide the mode of selection, trials were made with seed selected from (1) the top, (2) the middle and (3) the lower end of the spike. These were sown in plots along with others sown with (4) the best sized seeds selected indiscriminately from the whole spike. Those from the middle of the spike gave by far the best yield, while those from the top were better than those from the bottom, these last being less even than the yield from the large grains indiscriminately picked. This trial will be continued. It will be a useful one if it gives uniform results.

In cotton experiments, the farm selected seed gave an increase of 11·9 per cent. in yield, and judging from last year's results in all probability as large an increase in quality over unselected seed. The experiment has attracted attention. All the spare seed from the crop was eagerly bought and sown by neighbouring farmers, a sure proof of their appreciation. The experiments regarding the possibility of securing a uniform colour in the Nankin cotton by selecting the seed from bolls of the desired tint may now be concluded. The result of adequate trial is that it is very difficult to obtain clean cotton of an uniform colour, though it is possible to do so with great care in selection of seed. Mr. Strachan has thus proved his point, but as the variety of cotton is poor in yield and undesirable in every respect, the conclusion is not of great importance. The Military Department has now (Government Resolution 6560, dated 28th September 1887) withdrawn its special encouragement of this variety. Its action is justified by experimental results.

The selection of seed cotton from 3-, 4- and 5-celled bolls was continued. The results are:—

| Kind of Seed. | Percentage of bolls in produce. | | | | | |
|---|---|---|---|---|---|---|
| | Acclimatized American Cotton. | | | Sindi Cotton. | | |
| | 3-celled. | 4-celled. | 5-celled. | 3-celled. | 4-celled. | 5-celled. |
| 3-celled ... ... ... .. | 6·6 | 78·4 | 14·9 | 66·8 | 33·1 | 0·1 |
| 4 " ... ... ... ... | 2·7 | 80·3 | 17·0 | 66·2 | 33·6 | 0·2 |
| 5 " ... ... ... ... | 2·0 | 69·0 | 29·0 | 34·1 | 63·5 | 2·4 |
| Unselected ... ... ... | 5·1 | 76·7 | 18·2 | 57·2 | 42·3 | 0·5 |

The 3-celled capsule is a common characteristic of the indigenous, as the 4-celled capsule is of the exotic variety.

*Result.*—The produce shows a slight tendency to imitate the seed. The experiment will be continued. If the results are persistent, they will be of considerable value to cotton growers.

The Lois Weedon experiments on wheat are being continued, but notice need not be taken of them in this place at this stage. Other minor experiments were undertaken and duly recorded in the published farm report, but call for no remark here. A valuable collection of wheats of several varieties has been made and classed. The Bombay hard white as grown in Násik and the Bakshi, also a hard white, as grown under irrigation in the Deccan, grow well in Sind and yield well and have attracted attention. Some Australian soft whites have now been acclimátized and are progressing towards equality with local kinds, but the pedigree wheat received from Messrs. Oakshott and Co. failed utterly for the second time.

Saltbush and Barilla were sown. The former failed. The latter did better, but the Superintendent thinks that the well-known tamarisk will in Sind be of greater value in lessening the admixture of salt in some saline lands. This must be put to the test of experiment.

**The Nadia'd Farm.**

18. A full account of the farm and the association to which it owes its existence was given in last year's report. The sale of the pamphlet is extending. The Show of 1887 was more successful than the former ones. The encouragement given to agricultural education has been enlarged by the grant of a scholarship to be held by a pupil of the Bombay Veterinary College nominated by the Association. The Cultivation Book has been kept regularly and neatly. The seed store is still in existence but has not secured the degree of success anticipated. The village Banias who supply seed to the cultivators should be induced to use the facilities offered. Through them alone can the rayats be reached. The store now competes against them in some respects. The finances of the Association are flourishing.

The barilla plant has been successfully grown on the farm and its value as a salt land plant will be tested. The experimental results have been reviewed and submitted with the Committee's report to Government.

*B.—Experiments on various Indigenous and Exotic Products.*

**1. Wheat.**

Distribution of seed wheat.

19. The general distribution of selected seed wheat was abandoned last year for reasons fully recorded, but in Sind the success in the Thar and Párkar District induced a further distribution of the produce of the soft white seed supplied in 1885 by the Karáchi Chamber of Commerce. In all 28 Zamindárs sowed 308 acres with 368 maunds of seed. The aggregate yield was fivefold. Samples from 25 fields were submitted to the Chamber which passed the following very favourable verdict. "The wheat compares very favourably with the best quality received here from Sind and the Panjáb. It may be placed in the first grade of qualities and it may be safely taken for granted that it will command the top market rate of the day, provided it is kept free from barley." Local reports state that the plant is larger and the stalk stronger, that the seed comes to maturity earlier, and that considerable immunity from rust is enjoyed. The Deputy Commissioner has applied for a grant of Rs. 1,000 which has been sanctioned. The seed is given with the condition that an equal value be returned on the crop. It is certainly worth while growing this wheat in the Nára Valley of Thar and Párkar. Experience elsewhere shows that the yield will go on increasing, though now and then, say once in 10 years, it will be advisable to change the seed by fresh importations.

Success in Sind.

Trials with foreign wheats.

The trials of English and Australian wheats have been noticed above. The success of the latter on the Sind Farm is remarkable. The former though tried with care at the farms, including the College of Science Farm at Poona and the State Farm at Bhávnagar, was a complete failure.

Steam Thresher.

Messrs. Marshall, Sons and Company's thresher was exhibited at the Poona and Shikárpur Agricultural shows, and one set worked after the latter show in the Lárkhána District for a time. The cost per imperial maund at Shikárpur was calculated at 14 pies. This coincides with previous calculations which were 1 anna. The difference is due to the far larger proportion of straw to grain in the fine Sind wheats. The straw-bruising apparatus has been much improved and may be said to be almost perfect. Still the makers are bent on further improvement. At Lárkhána the Zamindárs were not satisfied with the bruising. I am satisfied and I believe that in time the people will be content with the present work, though the makers are right in temporarily improving this part of their machine to ensure its introduction generally. Messrs. Ransomes Sims and Jefferies of Ipswich are taking up the subject again. They had pressed Government's attention to it several years back, but received no encouragement. New machines have been inspected at work by Mr. Stormont at the workshops of both the above-

named firms. It is trusted that they both will soon make their appearance on the field. This introduction of steam machinery will be the most effectual means of inducing the mercantile community to lower the percentage of refraction, now allowed in export samples.

Trade.

In spite of the short area under wheat of the season, the exports for the first 8 months of 1887 were very nearly as high as those of the same period of the previous year and higher than those of any previous year (see Appendix B). The following table for the 3 years ending 1886 is interesting :—

*Sources of Wheat supply to England.*

| | 1884. Cwt. | Per-centage. | 1885. Cwt. | Per-centage. | 1886. Cwt. | Per-centage. |
|---|---|---|---|---|---|---|
| From the United States... | 32,946,677 | 53 | 36,007,187 | 46·7 | 36,094,420 | 58·7 |
| „ British North America ... ... | 2,446,331 | 4·0 | 2,026,021 | 2·6 | 3,851,494 | 6·2 |
| „ Australia ... ... | 4,897,766 | 7·8 | 5,279,230 | 6·8 | 738,699 | 1·2 |
| „ Russia ... ... | 5,401,964 | 8·6 | 11,986,359 | 15·5 | 3,710,099 | 5·9 |
| „ Egypt ... ... | 999,578 | 1·6 | 1,09,983 | 0·1 | 40,632 | Nil. |
| „ India ... ... | 8,009,909 | 12·9 | 12,101,963 | 15·7 | 11,028,665 | 17·6 |
| „ Other Countries ... | 7,515,291 | 12·1 | 9,778,250 | 12·6 | 6,679,567 | 10·4 |
| Total ... | 62,217,516 | 100 | 77,288,993 | 100 | 62,143,576 | 100 |

The imports to Bombay from the Karnátak over the new system of Southern Marátha Railways for export abroad have increased by strides. In the first 8 months of 1887 the increase over last year amounted to 60 per cent., while at the same time the imports by sea into Bombay from the same tract quadrupled.

## 2.—Cotton.

Test shipment of acclimatized American cotton.

20. This shipment of the produce of cotton seed originally imported from America acclimatized in Dhárwár and grown for several years in Khándesh has already been referred to. The net result is a proof of the necessity of new importation. I have only to add that though experts considered the staple poor and though it only fetched $4\frac{3}{4}d.$ per lb., the spinners' report was more favourable. "It turned out good, the loss in going through the blowers was 8 per cent. It would probably take 114 lbs. of this to make 100 lbs. of yarn."

New seed from America.

I described last year the new importation of seed and its distribution. I am now able to give a very satisfactory account of the results. In Dhárwár in 6 villages of selected tálukas, *i.e.* tálukás where the exotic cotton has held its own without the aid of official pressure, sowings were made by Mr. Price. A little delay arose owing to an untoward break late in August 1886. The season was on the whole favourable. The average yield was 158 lbs. per acre of seed cotton. The proportion of clean cotton to seed was found to be 1 to $2\frac{1}{2}$, a high proportion when compared with the produce of the old acclimatized seed, which is generally about 1 to 3. Mr. Baines, while acting Director, inspected the fields and placed on record the following observations :—

1. The higher light black soil showed better results than the deep rich plain.
2. The better the growth of the crop, the less the injury by blight and discolouration.
3. The pods were larger though fewer than on the crop raised from old acclimatized seed.
4. The plants were stouter and lower in growth than the old cotton.

It must be remembered that these results are for the first year of introduction while the process of acclimatization was only commencing. The smaller growth of the plants seems to point to some hybridization with indigenous cottons in the case of the old cotton.

The crop was considerably better in some places than in others, but on the whole it was everywhere fairly good. The net cost to Government of the importation, experimental sowings and distribution has been only Rs. 233.

*Sowings of New American Seed Cotton in Dhárwár, 1886.*

| | Name of Village. | Area Sown. A. | Area Sown. g. | Amount of Seed. Per Acre. Lbs. | Amount of Seed. Total. Lbs. | Date of Sowing. | Outturn in Seed Cotton. Acre Rate. Lbs. | Outturn in Seed Cotton. Total. Lbs. |
|---|---|---|---|---|---|---|---|---|
| Hubli | Kusugal ... ... | 2 | 39 | 10 | 29½ | 29th Sept. ... | 80 | 237 |
| Hubli | Halihal ... ... | 14 | 35 | 7 | 102½ | 29th Aug. ... | 128 | 1,908 |
| Bankápur | Ingalgi ... ... | 25 | 10 | 5 | 125 | 26th Aug. ... | 158½ | 4,006 |
| Bankápur | Budihal ... ... | 8 | 7 | 6½ | 53 | Do. ... | 173 | 1,414 |
| Bankápur | Kotgiri ... ... | 19 | 5 | 6½ | 125 | 7th Sept. ... | 240½ | 4,603 |
| Karájgi | Devgiri ... ... | 16 | 9 | 7½ | 125 | 14th Sept. ... | 97 | 1,570 |
| | Total ... | 86 | 25 | 6½ | 560 | ..... | 158½ | 13,738 |

I have under the head Farms shown the result of experimental sowings at Bhadgaon. A large portion of the new seed was taken over by the Kolhápur Agency. In some States the season was unfavourable. The report received from Miraj Junior states—"The cotton plant raised from the new American seed is 3 feet high as compared with 2¾ feet in the case of the old cotton. The pods are fewer but larger, about in the proportion of 2 to 3, but the weight is greater, 10 pods of the new weighed 10½ tolás, while the same number of the old only 8½." These notes correspond with Mr. Baines' observation.

In the Panch Maháls Mr. B. A. Dalál sowed the new cotton. It gave a poor yield but he likes the quality of the sample.

The seed collected in Dhárwár has been distributed as follows, full price being taken in cash:—

| Táluka. | Village. | Amount. | Táluka. | Village. | Amount. |
|---|---|---|---|---|---|
| *Bijápur District.* | | Lbs. | *Dhárwár District.* | | Lbs. |
| | | | Dhárwár ... ... ... | 1 | 56 |
| Indi ... ... ... | 2 | 630 | Navalgund ... ... | 10 | 1,520 |
| Bágevádi ... ... ... | 1 | 131 | Gadag ... ... ... | 1 | 2,986 |
| Hungund ... ... ... | 1 | 420 | Ron ... ... ... | 1 | 327 |
| | | | Bankápur ... ... ... | 6 | 2,374 |
| | | | Ránebennur ... ... | 1 | 78 |
| Total ... | 4 | 1,181 | Total ... | 20 | 7,341 |

Besides this, small quantities have been sold to the Bhadgaon Farm (240 lbs.) and to the Junágad (80 lbs.), Tonk, Rajputana (10 lbs.) and Jaypur (800 lbs.) States.

A superior kind of cotton.

21. I may incidentally remark that Messrs. Sugden and Co. of Kaira have sent a sample of cotton alleged to have been grown in the Kaira District to the Chamber of Commerce through this office. It was considered to be very fine, "superior in length, strength and silkiness of staple to any description produced hitherto in India," and the remark was added that if sufficient quantity could be obtained, it would be possible in India to manufacture yarn and cloth of the finest qualities.

The variety is not known, but Mr. Sugden has promised seed for experimental cultivation on the Government farms next season.

Saw-gins for cotton.

22. The Dhárwár factory is languishing. Perhaps the degeneration of staple in the exotic cotton is the cause. The extra price does not encourage or repay the use of the rather expensive

gins. Private enterprize has not relieved Government of the necessity of maintaining the factory as was hoped. It has been decided, however, that if the Local Boards will not take over the factory, they will be closed on 31st August 1889. By this time the newly imported seed may alter the prospect of a fairs.

This gin is wonderfully appreciated in Sind for indigenous cotton. It is only used in Dhárwár for exotic. I have in former reports given details of the working in the Sind Farm. Sawgins were exhibited at the Shikárpur Show and were much liked. But a further indication of approval must be recorded. A large cotton dealer at Hyderabad, Sind, has contracted with the Government farm to gin considerable quantities of cotton with the saw gin driven by the farm engine. The result of this working is not yet known.

**Forecasts of Wheat and Cotton.**

23. These forecasts have been punctually issued in the revised form, noticed in paragraph 80 of last Report. It is believed that they are of use to some members of the mercantile community. They at any rate give the area under these important crops far earlier than it can be ascertained by any private agent. Further, with the general remarks on other staples they form a supplement to the weather report, useful to Government to gauge the progress of the season. As the appended tables of agricultural statistics give later and more accurate detail than the forecasts, the summary admitted into former reports is now superfluous.

**3. Tobacco**

24. In the last report (para. 82) some opinions on the latest curings of the Nadiád tobacco were given. These have been supplemented by more numerous ones published in the Government Gazette, 1887, Part III, pp. 698—704. Though small encouragement is given, some useful suggestions have been evoked. Messrs. B. Desai and Co. have fully maintained their energy in using every effort to win a market for improved tobacco. Success is yet ahead. Ráo Bahádur Bechardas himself had 60 acres under Virginia, Sumatra and Havana seed, and has this year (1886-87) 75 acres. All grow excellently. The only difficulty is curing. Some suggestions are before Government which will be considered.

**4. Arrowroot.**

25. Mr. Gogte of Dápoli after securing the Commissariat contract for 1887-88 at 4½ annas per lb., applied for and obtained an extension for 3 years. He has already enlarged his cultivation and will now still further increase it. It is likely with the aid received from Government that Ratnágiri-grown arrowroot will become an important production of the district. But the cultivation of arrowroot is extending in other directions. Successful experiments have been made as reported at the Khándesh Farm, and in Poona Mr. Woodrow is giving considerable attention. He expects a yield of 12 tons of roots per acre.

**Sugar.**

26. The Poona Refinery is still closed though some additional concessions have been made to the proprietor by the A'bkári Department. Sorghum sugar was attempted at the Bhadgaon Farm with no success.

A special report showing the extent of cane, the methods of cultivation, &c. has been prepared during the year and published (see last Report, para. 95).

**Divi Divi (Cæsalpinia Coriaria).**

27. The cultivation of this tree for its pods valuable as a dye appears likely to extend. At Bhadgaon Farm the plantation yields, annually, about two tons of pods. It has only been successfully grown by the Forest Department in the Southern Circle. In Kánara 2 plantations started in 1875 show 13,000 trees of which 450 are bearing. There are plantations in Bijápur and Dhárwár, where also the tree has been successfully grown as a road-side tree. In this respect it is likely to be as harmful as bábhul. The tree requires a moist sub-soil and care for two years after planting. A trial shipment from Khándesh fetched £8 per ton. Experts valued it at £10. The opinions were published in the Government Gazette, 1887, Part III, pages 895 to 897.

One Bombay firm has shown attention to the opinions given and expresses interest in the subject.

**Ensilage.**

28. The use of ensilage at Bhadgaon and Poona as an ordinary means of feeding the cattle has already been noticed. A successful trial was made at Belgaum by the Agricultural Instructor at the High School. This is creditable because a former attempt was only partially successful. In Káthiáwár extensive experiments were made. In Navánagar and Gondal masonry silos were built and were filled. The result was fairly successful. Earth silos were constructed at Junágad also.

There is some prospect that the Agricultural Department will soon be in a position to take up the subject again, for the place of ensilage in Indian agriculture is clear. It enables the rayat to provide succulent food in the hot weather and to keep the superabundance of grass or other fodder of one year to meet the deficiency of another.

**Improved Agricultural Implements.**

29. I have nothing special to record under this head for the year under report.

*C.—Agricultural and Cattle Shows.*

30. The principal shows of the year were :—

| Province. | Place. | Date. | Prize Money. | Contributions. |
|---|---|---|---|---|
| | | | Rs. | |
| Deccan ... ... | Ahmadnagar... | 4th-5th November 1886. | 2,220 | Government Rs. 600; Local Board Rs. 300. |
| Sind ... ... | Shikárpur ... | 10th-12th January 1887. | 5,577 | District Board 6,140; Private gentlemen Rs. 3,890. |
| Gujarát ... ... | Nadiád ... | 29th January-2nd February 1887. | 1,857 | Local Boards and Municipality Rs. 2,000; Gujarát Chiefs Rs. 2,825; Private gentlemen Rs. 726. |
| Southern Marátha Country. | Chinchli ... | 9th-11th February 1887. | 2,769 | Southern Marátha Country and Satára Chiefs Rs. 5,625. |
| Deccan ... ... | Poona ... | 17th-20th February 1887. | 2,262 | Government Rs. 1,000; Local Board Rs. 500; Municipalities Rs. 700. |

*Ahmadnagar Show.*—The money awarded in prizes amounted to Rs. 2,220, of which Rs. 970 were awarded to horses, as against about Rs. 2,000 in 1885. In the Horse Show 281 animals were exhibited as compared with 252 in 1885. The increase was chiefly due to mares. As the people are learning to regard a brood mare as a valuable possession, it is hoped that the quality of the horses will be soon raised. As the Poona horses carry off a large sum of money, it has been decided to disqualify the exhibits from Poona. In the cattle section 343 beasts were shown as against 300 in 1885. Except the small Málvi stock and the buffaloes which were only fairly good the cattle exhibited were indifferent. The grain and seed section showed a fine collection. The wheat was rich and fine, the jowári and bájri excellent, and the rice from Akola very good. An attempt made to have articles of local manufacture represented at the show was successful only to a small extent.

*Shikárpur Show.*—This show has become very popular. Though more than 900 animals were rejected the exhibits numbered 936 or 89 more than last year, and the money awarded in 523 prizes amounted to Rs. 5,577 against Rs. 4,043 given in 208 prizes in 1886. 12 remounts were purchased, and though there was a large number of good and very useful horse stock suited for mounted infantry, no British remount or Native Cavalry officers were present at the show to purchase them. The mules exhibited showed an improvement. A few milch cows and draught bullocks were exhibited. To guard against the show being so large as to be unwieldy, the prizes from the next year are to be confined to horses, ponies, mules and cattle. It was intended to hold an exhibition of Agricultural machinery with this show, but owing to the non-arrival of the steam thresher and of some American machinery it was postponed to 29th January. It was, however, fairly attended and many of the visitors displayed a keen interest

in the machines. The machines were divided into four classes—Steam, Horse, Bullock and Hand-power machinery. In Class I the success of the steam thresher was undoubted. The machinery included in Class II owing to its late arrival could not be worked as there was no time to train horses. In Class III the thresher and shaker was worked by the bullock gear. This machine neither dresses the grain nor bruises the straw. When worked by four bullocks it threshed 162 lbs. of wheat per hour. In this class a Bihia mill was also exhibited and met with well-merited success, pressing in 57 minutes 330 lbs. of cane and giving 242½ lbs. of juice. In Class IV were shown fodder cutters, winnowers, gram crushers, a rice huller, a flour grinding mill and a saw-gin. Of all these it is reported that the winnowers and the saw-gin are the most acceptable and likely to find favour with the people. The chaff cutters exhibited did not reach a high standard of perfection, being very heavy and hard to work by hand. The gram crushers worked satisfactorily but are too costly to find favour with the natives. The flour mill was a failure, the power required to work it being ½ cwt. and the outturn only 12 lbs. per hour. The rice huller did not attract much attention. The saw-gin attracted much attention.

*Nadiád Show.*—The show is biennial and is organized by the Agricultural Committee of Nadiád. The amount awarded in prizes was Rs. 1,857 against Rs. 1,040 in 1885. The marginal table shows the exhibits. The animals were good representatives of their kinds. Some poultry was also shown. In the agricultural produce section indigo, the cultivation of which is being revived in Gujarát, attracted some attention. The collection of tobacco exhibits native and foreign was complete. Though fibres were poorly represented Mr. Sugden of Wásna exhibited a very good sample of cotton. (See above para. 21). In the machinery court were exhibited a tobacco cutting machine, a collection of tobacco and cigarette making machinery, a model of a double *mot* or water-lift, Burgess and Key's cotton gin, two cane crushing mills and some American hand implements.

| | Exhibits. | Prize Money. |
|---|---|---|
| | | Rs. |
| Live Stock . | 188 | 567 |
| Agricultural Produce ... | 3,762 | 847 |
| Machinery | 421 | 443 |
| Total ... | 4,371 | 1,857 |

*Kolhápur and Southern Marátha Country Horse and Agricultural Show.*—To remove the erroneous impression that Kolhápur takes the entire credit of the show and allow other Chiefs the honour of sharing the expenditure and to make the Southern Marátha Country Chiefs take greater interest in the institution, the name of the show has been changed from the Chinchli Show to the Kolhápur and Southern Marátha Country Horse and Agricultural Show. As compared with the last year the exhibits and the corresponding prizes are on the increase except in the class of buffaloes. The marginal table shows the exhibits. Rs. 2,769 as against Rs. 2,991 in 1886 were in all awarded in prizes. Besides the animals exhibited there was a large collection of cattle and horses for sale. The number of oxen and horses was the largest that was ever brought since the establishment of the show. A decrease in the agricultural produce is due to the bad crop of jowári, which was a good deal damaged by the heavy rains in November and December last. A new feature of the exhibition was the addition of 62 specimens of forest products, consisting of 40 different sorts of timber and 12 of fibres.

| | Exhibits | Prizes. |
|---|---|---|
| Horses ... | 117 | 66 |
| Oxen ... | 297 | 61 |
| Buffaloes ... | 15 | 2 |
| Agricultural Produce ... | 374 | 123 |

| | |
|---|---|
| Horses ... ... | 906 |
| Oxen ... ... | 11,937 |
| Buffaloes ... | 2,257 |

*Poona Show.*—With a view to add one more feature to the rejoicings in honour of the Jubilee of the Queen-Empress the show was postponed from the 7th to the 16th and then to the 17th February. The holding of the show at a late date when the harvesting of late crops was in full swing and the subsequent postponement detracted not a little from its success. Much persuasion was required to induce cultivators to take their cattle to the show and even then the distant tálukás of Junnar and Indápur remained unrepresented. It is, therefore, suggested that to suit the convenience of the cultivators and to utilize the stables, sheds, &c., erected for the Horse Show, the Cattle and Agricultural Show should be held immediately after the Horse Show on the same ground in the middle of

October. This suggestion though approved by Government, is in my opinion an unfortunate one. The right time for the show is early February. It was purposely separated from the Horse Show held in September after full discussion. The point will be no doubt further considered by the Committee before the next show is held. The addition of a poultry section and the exhibition of agricultural implements, however, added much to the attraction. The steam wheat thresher and the chaff cutter with the bullock gear were shown at work. The working of the steam thresher is noticed under wheat section of the report. Some good specimens of Sutton's seed potatoes were exhibited by Mr. Crawford, which at his desire were distributed for planting. The amount awarded in prizes was for cattle including sheep and goats Rs. 1,127; poultry Rs. 601; agricultural field produce Rs. 309; garden produce Rs. 125; essays Rs. 100; total Rs. 2,262 against Rs. 1,265 in 1884. As it was noticed that many of the successful exhibitors were other than *bonâ fide* agriculturists it has been decided that prizes should be confined to *bonâ fide* growers and agriculturists.

The Show Committees, to whom the question of giving in lieu of cash prizes of live stock and implements was referred, have all with the exception of the Nadiád Show Committee declined to go in for the change, the chief reasons assigned for the refusal being that the live and dead stock prizes will (1) involve more expenditure, (2) give more trouble to the unpaid managers of shows, and (3) unnecessarily interfere with the taste of prize winners.

## VI.—CATTLE BREEDING AND VETERINARY ESTABLISHMENT.

### Cattle Diseases.

31. Last year I briefly summarized the available information on this important subject. This year I am able to give somewhat fuller details and to append a note (see Appendix A) prepared in my office from the reports of the officers of the Bombay Veterinary College and from notes on Lectures by Dr. McBride at the Royal Agricultural College, Cirencester. The note has been scrutinized by Mr. Steel, Superintendent of the Bombay College, and the remarks now to be made are to a great extent culled from a note written expressly for my information by him. They are included in my report at the direction of Government (Government Resolution No. 5487, dated 18th August 1887,) to show what is being done for the information of Government, and the Government of India, and to be available for the guidance of revenue officials and others when called upon to deal with cattle disease.

During the year the principal outbreaks were:—(1) rinderpest, (2) swelling of the mouth or neck, (3) swelling of the throat, and (4) foot and mouth disease. Probably Nos. 2 and 3 are the same disease.

### *Rinderpest.*

Rinderpest was reported from Ratnágiri, Ahmadabad, Panch Maháls, Broach, Thána and Bijápur and the State of Miraj. In Ratnágiri it was of an extremely virulent type. Elsewhere it was milder than the outbreak in Kánára of the previous year. There is evidence that the disease broke out also in other places, *e. g.* Bombay Island, Rájkot in Káthiáwár and Pánchgani, but was not reported. Special veterinary officers were deputed by Government to all the districts named above, whence intimation of the outbreak was received, except to Thána.

In Ratnágiri the disease appeared at Ganpati Pula (Táluka Ratnágiri) in September and lingered till December in and about Málgund, close to Ratnágiri itself. After cessation here it apparently spread over the whole district during April and May. It was most virulent in the hot weather, especially in May, and especially in places with poor grazing and foul drinking water. It subsided after the early monsoon showers. The contagion is supposed to have come from Kolhápur, but the original lines of contagion cannot now be traced. The southern districts of the Presidency are saturated with rinderpest. The mortality reported in Ratnágiri and other districts was considerable, but figures are not available

The following table shows such details as the special enquiries made have brought to light:—

*Extent of Rinderpest in the Presidency, 1886-87.*

| District. | Tálukás and Villages affected. | When appeared. | When disappeared. | Remarks. |
|---|---|---|---|---|
| *Gujarát.* | | | | |
| Ahmadabad ... | Daskroi (4 villages) ... | About 15th April. | About 31st May. | Mortality apparently slight; figures not available. |
| Panch Maháls ... | Godhra ... ... ... | Do. ... | 16th June... | |
| Broach ... ... | Hánsot (7 villages); Vágra (11 villages; slightly in Jambusar; and on both sides of the Narbada in Ámod. | March ... | Do. ... | Appeared at Belota and spread by contagion over the whole of Hánsot. Mortality great. At a single village Dhantria, 100 cattle died in a fortnight, and (about 20th May) 5 or so a day. Statistics deficient. |
| *Konkan.* | | | | |
| Thána ... ... | Máhim (9 villages) ... | Early May . | About 25th June. | 311 attacked, 256 died, 43 recovered, *i.e.* about 70 per cent. cases fatal. |
| Ratnágiri ... | Ratnágiri (9 villages); Khed; Sangmeshvar (3 and the town); Devgad(6) | September... | December ... | 1. Confined to Ganpati Pula and Málgund, where about 200 cattle are reported to have died. Other details not available. |
| | Málvan (4 and the town); Vengurla (1) and Chiplún (4). | March ... | June ... | 2. Great mortality owing to want of proper repressive measures. Virulent in coast villages. Appeared at Málgund and neighbouring villages both in cold weather and hot season. |
| *Karnátak.* | | | | |
| Bijápur ... ... | All tálukas ... ... | April ... | June ... | Severe in the treeless barren north and where the filthy tank water was used. Mild in the south. |
| Miraj ... ... | Especially the town ... | Late May ... | Not reported | Mortality considerable, but figures not available. |

*Swelling of the mouth (or neck).*
*Do. do. throat.*

The former disease broke out in Dhantria in the Hánsot Táluka of the Broach District and is reported to have lasted 4 days from the 6th September last. It was confined to a single herd, which lost 14 head. The latter disease, if it is distinct from the former, was reported from Viramgám Táluka (Ogan village) in September. The outbreak lasted 15 days and carried off 100 animals.

Mr. Steel was requested by Government (19th September) to depute a special officer to Viramgám, Mr. D. N. Vakil. But when he arrived, 25th September, the disease had disappeared. Enquiries made showed that the outbreak was not confined to Ogan but involved the neighbouring villages and everywhere proved very fatal. "There is fairly strong evidence that it was malignant œdema vulgarly known as blackleg, black quarter and malignant sore throat, an anthracoid disease due to an organism different from that of true anthrax" (Mr. Steel). The local vernacular name given to this disease is *hummadiyu.*

32. Mr. Steel sums up his note with the following remarks:—

"The observations made in the year under review amply establish—

(*a*) that rinderpest is the great cattle scourge of this presidency;
(*b*) that foot and mouth disease is perennially present in some districts;
(*c*) that anthrax and pleuropneumonia if they occur, are not frequent;
(*d*) that the present means of dealing with cattle disease are quite inadequate and that the losses from this cause are so great as to amply establish the need for more elaborate repressive measures;
(*e*) that cattle owners throughout the Presidency feel themselves quite unable to cope with this serious difficulty.

"The extent and importance of cattle disease will never be thoroughly realized until an approximately accurate system of statistics of cattle in health and disease has been established. There is evidence that disease of communicable nature among cattle occurred during the year under consideration and was not officially reported, that the accuracy of reports sent in is often more than doubtful, and that thus no adequate and comprehensive view of this matter can yet be taken by the administrative."

"It has now been amply established that contagion and *contagion only*, is the means of propagation of rinderpest, and this is a fundamental fact in dealing with cattle disease in the Presidency which must be neither neglected nor forgotten. No climatic conditions, however arduous and unhealthy, suffice to generate this or any other cattle plague. That Indian rinderpest is no exception to the rule has been established in the Hospital attached to the Bombay Veterinary College, where the greatest vigilance has to be constantly exercised against introduction of rinderpest with new patients or by other methods of contagion. So great is the virulence of the disorder that our vigilance cannot always suffice against its insidious approaches, and in May last the disease assumed the dimensions of an outbreak in our cattle wards and had to be promptly met by segregation, isolation, and disinfection, which measures proved thoroughly effectual in a short time. It is to be hoped that what was thus done in our Hospital may one day be equally thoroughly done in the Presidency or at any rate that rinderpest may be constantly *repressed* as it is in Germany, France, Austria and other continental European countries by a staff of efficient veterinarians with ample powers."

33. The value of the Bombay Veterinary College to the country at large has thus already shown itself. Segregation in the case of rinderpest, even with the numerous local difficulties, is not impossible, and its utility is demonstrated by Mr. Steel's experience in Bombay. It is urgently necessary that the Local Boards should consider the advisability of employing trained men from the College, as they are available. This is a matter for special consideration in those districts and tracts where rinderpest is proved to exist, though it may not show itself every year. The Local Boards are not called on to do an impossibility. The course is straightforward, and with energy and a certain expenditure, very insignificant when the attainable results are so important, the Boards have it in their power to stamp out the disease in time.

Anthrax is apparently not a characteristic disease of the Presidency.

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

### *A.—Agricultural.*

34. The statistical forms recommended by the Calcutta Conference in 1883 and sanctioned by Government Resolution No. 9706, dated 9th December 1884, at the instance of the Government of India, have been embodied in the Huzúr Part of the Revised Manual which came into use on the 1st August last. The fiscal Form C. which was referred to the Divisional Commissioners, (last Report, paragraph 116) has been now finally settled (Government Resolution No. 2659, dated 29th April 1887) and embodied in the Manual. The statistics of agricultural stock are this year returned in the revised form. Two new statements are added to the crop return, one showing the number of principal fruit-bearing trees and the other giving the best information available as to the outturn of the chief crops. A return is added showing details as to the water-supply of each district. Under the Manual this return is due once in five years.

The district returns show more improvement in compilation than in punctuality. Though due on the 1st September some were not received till the end of October and even later. In such cases no time has been allowed for referring back doubtful questions. The returns of the Bijápur and Dhárwár Districts, which were compiled in the tálukas by the Circle Inspectors and in the Huzúr by the Assistant District Inspectors, show a greater degree of accuracy both in registration and compilation and further are accompanied by very full and satisfactory explanations of increase and decrease. Full attention to these points will not, however, be possible in other districts until the agricultural staff is introduced, though some Collectors have evidently bestowed great attention to the subject.

The following comments on the returns appear requisite :—

#### Return No. I.—Area of Available Statistics.

35. The gross area of the Presidency is not yet known and cannot be known until the survey is complete. The reported area is greater by over a million acres than that returned last year for Sind, while in the Presidency proper, though the net increase is only 14,410 acres, the district figures, apart from differences caused by transfer of territory, show considerable variations. This is partly to be explained by the former omission through inadvertence of the

areas of some villages and partly by closer approximations of uncertain areas, such as the outbandi tracts of Khándesh, or the villages of the Gajendragad territory in Dhárwár. There are further considerable variations between the numbers and areas of Government and alienated villages. In the Panch Maháls the 53 Nárukot villages, shown as Government, have now been transferred to alienated. As however no area, even approximate, is credited to this tract, no difference is caused except in the number of villages. In most cases these discrepancies and differences are explained in the returns received, but in some no explanation is attempted, as is necessary.

The acreage of available statistics in the Presidency proper has increased from 431 to 447 lákhs or by 3·7 per cent. The increase is due chiefly to the inclusion of the Ratnágiri District which failed last year to send in complete returns. In Kánara the area of 101 newly surveyed villages is added. In Panch Maháls 12 tálukdári and in Surat 4 sarákati villages submit returns for the first time. On the other hand, in Khándesh 177 outbandi villages with an approximate area of 222,000 acres, shown last year, are excluded. In Ahmadabad 11 and in Khándesh 35 unsurveyed alienated villages are relegated to the last columns of the return. Their inclusion in the area for which statistics are available last year was incorrect, for it has been ruled that the statistics of unsurveyed alienated villages cannot be accepted as even fairly approximate.

**Return No. II.—Cultivated and Uncultivated Area.**

36. The following table, similar to that given in last year's report, summarizes the information contained in returns, Nos. 1 and 2 :—

| No. | DISTRICT. | Percentage on gross area of area for which statistics are not available. | Percentage on Net Area for which Statistics are available, of Areas | | | | |
|---|---|---|---|---|---|---|---|
| | | | Cultivated. | | Uncultivated. | | Forest. |
| | | | Actually cropped. | Current fallows. | Available for cultivation. | Not available for cultivation. | |
| | **A.—Presidency Proper.** | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... ... | ·76 | 58 | 19 | 4 | 19 | ... |
| 2 | Kaira .. ... ... .. | 8·73 | 75 | 4 | 9 | 12 | ... |
| 3 | Panch Maháls ... ... ... | 22·78 | 34 | 13 | 38 | 9 | 6 |
| 4 | Broach ... ... ... | 1·99 | 61 | 8 | 4 | 27 | ... |
| 5 | Surat... ... ... ... | 2·44 | 46 | 26 | 6 | 18 | 4 |
| | Average ... | 5·96 | 56 | 16 | 9 | 17 | 2 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... ... | 12·36 | 57 | 5 | 18 | 12 | 8 |
| 7 | Násik ... ... ... | 3·58 | 54 | 11 | 6 | 9 | 20 |
| 8 | Ahmadnagar ... ... ... | 2·31 | 64 | 9 | 4 | 10 | 13 |
| 9 | Poona ... ... ... | 1·11 | 63 | 10 | 2 | 14 | 11 |
| 10 | Sholápur ... ... .. | 2·89 | 72 | 11 | 3 | 9 | 5 |
| 11 | Sátára ... ... ... | 4·26 | 60 | 13 | 2 | 10 | 15 |
| | Average ... | 5·15 | 61 | 9 | 7 | 11 | 12 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... ... | ·19 | 61 | 11 | 7 | 6 | 15 |
| 13 | Bijápur ... ... ... | ·93 | 73 | 10 | 8 | 5 | 4 |
| 14 | Dhárwár ... ... ... | 2·59 | 71 | 9 | 3 | 7 | 10 |
| | Average ... | 1·22 | 69 | 10 | 6 | 6 | 9 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 2·23 | 21 | 19 | 8 | 37 | 15 |
| 16 | Kolába ... ... ... | 2·39 | 33 | 20 | 7 | 27 | 13 |
| 17 | Ratnágiri ... ... ... | 29·37 | 32 | 37 | 1 | 29 | 1 |
| 18 | Kánara ... ... ... | 8·21 | 9 | 4 | 34 | 21 | 32 |
| | Average ... | 11·9 | 22 | 19 | 14 | 28 | 17 |
| | Average A. ... | 5·71 | 55 | 12 | 8 | 14 | 11 |
| | **B.—Sind.** | | | | | | |
| 19 | Karáchi ... ... ... | 61·45 | 14 | 14 | 15 | 53 | 4 |
| 20 | Hyderabad ... ... ... | 33·85 | 15 | 25 | 42 | 18 | ... |
| 21 | Shikárpur ... ... ... | 35·83 | 20 | 19 | 33 | 21 | 7 |
| 22 | Upper Sind Frontier ... ... | 56·95 | 20 | 35 | 30 | 10 | 5 |
| 23 | Thar and Párkar... ... ... | 100 | ... | ... | ... | ... | ... |
| | Average B. ... | 62·27 | 17 | 21 | 34 | 25 | 3 |
| | Average for the Presidency ... | 25·18 | 49 | 14 | 12 | 16 | 9 |

Gross cropped area.

The gross-cropped area in the Presidency proper, excluding Ratnágiri, rose from 244 to 248 lákhs acres, or 1·3 per cent., the result of favourable rains for both the early and the late harvest. This extension of cultivation is general save in Belgaum and Sholápur. The decrease in the former is due to the very large fall in the area of twice cropped land, for the net area cultivated is larger than last year. In the latter district the decrease is small and due apparently to unfavourable early rains in the light lands of the two western tálukás.

Twice cropped area.

The twice cropped area shows a rise of 9·4 per cent., *i. e.* from 527 to 577 thousand acres, a proof that the late rains were good and seasonable. The registration of late sown crops is particularly defective. The increase on the whole may be due in part to a somewhat more careful registration than usual induced by the strict orders against the neglect of second crops contained in the Revised Manual. Apparent differences in some districts are due to alterations in the areas, for which the statistics are given, such as those noticed in paragraph 35 above.

The large falling off in Belgaum is conspicuous, when everywhere else there has been an increase in the twice-cropped land (Sholápur again excepted). This is not explained by the Collector. I know that the rice crop was late and poor. It may be that it was too late to permit the sowing of a second crop. It is further true that the decrease now under consideration is practically equal in area to the decrease in the area of jowári, deducting that covered by cotton in lieu of jowári. It may be that the jowári which grows from the shoots of the red variety, an early sown kharíf crop, is counted as a second crop and that the season was more favourable for the growth of the white late variety. But whatever the explanation, it is certain that it should have been given by the Collector.

The net cropped area.

The net cropped acreage has risen from 239 to 242 lákhs or 1·2 per cent. This increase is due in part to a net increase of 77,000 acres of new land taken up for cultivation, but principally to the cropping of land fallow last year. The decrease in land in occupation but lying fallow is general. Bijápur and Surat give the only exceptions. The reason of the increase in Bijápur is satisfactorily shown to be a more careful deduction of uncultivated portions of occupied survey numbers and is thus evidence not only of the improvement arising from the supervision of the Circle Inspectors, but also of the over-estimate elsewhere due to the neglect of this necessary deduction. No explanation of the increase of fallows in Surat is vouchsafed.

In the cultivation of unassessed land, *e. g.* river-bed, Broach shows a large increase of 5,000 acres, owing to late favourable rains.

New cultivation is shown to have taken place in all districts but Sholápur and Thána, where areas of 6 and 5 thousand acres respectively are transferred from the head "cultivated" to "uncultivated." Presumably this is land acquired from the occupants for forests in Sholápur, but no reason can be surmised as regards Thána.

It must be stated that the introduction of the Revised Manual, which gives full directions for the first time regarding the classes of land to be included under the heads respectively of "available" and "not available for cultivation" has necessarily varied the former customary allotment in some districts. Further comparison is therefore unsafe. It is, however, safe to infer that the general decrease in the head "land available for cultivation" is to be accounted for by more land being taken up for tillage. To this inference there are exceptions. In Násik the decrease of 120,000 acres under this head is due to transfer to forests, partly of assessed and partly of unassessed, cultivable waste. A similar transfer of some 60,000 acres took place in Sholápur. The forest area shows also large differences in Kánara, Kolába and Thána. In Kolába there is a simple increase due to new transfer of land to forests. The other two districts show decreases. In Kánara the forest area has fallen from 66 to 32 per cent. on the total area. In Thána from 27 to 15 per cent. In the former case the Collector attributes the difference to the revised classification of lands, in other words that

in the previous year areas not finally transferred to the Forest Department were included under the head "Forests". In the latter district the area formerly shown as Forest is partly shown under the head "not available for cultivation". Precise explanation is not given. It is especially necessary that the attention of Collectors should be directed to the importantce of explanatory changes in return No. 2.

**Return No. III.—Crops.**

37. Though, as already noticed, both the kharíf and rabi sowing rains were generally favourable, the natural result was as large an area of kharíf crops as could be put into the ground. The area of rabi crops, especially in the East Deccan and Karnátak, where they usually predominate, was thus markedly curtailed. Among cereals jowári and wheat and oilseeds show on the whole a general decrease, while other cereals, pulses, cotton, tobacco and sugarcane give a more than counterbalancing increase. The following table will show fully the effect of season as far as the area sown is concerned :—

PRESIDENCY PROPER (RATNA'GIRI EXCEPTED).

| Crops. | 1885-86 | 1886-87 | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|
| | Thousand Acres. | Thousand Acres. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| Jowári ... ... | 7,987 | 6,832 | ... | ... | 1,155 | 14·4 |
| Bájri ... ... | 4,500 | 4,904 | 404 | 9·0 | ... | ... |
| Paddy ... ... | 1,528 | 1,560 | 32 | 2·1 | ... | ... |
| Wheat ... ... | 2,067 | 1,957 | ... | ... | 110 | 5·3 |
| Others ... ... | 1,613 | 1,680 | 67 | 4·2 | ... | ... |
| Total Cereals ... | 17,695 | 16,933 | ... | ... | 762 | 4·3 |
| Tur ... ... | 477 | 628 | 151 | 31·7 | ... | ... |
| Gram ... ... | 692 | 712 | 20 | 2·9 | ... | ... |
| Others ... ... | 1,059 | 1,306 | 247 | 23·3 | ... | ... |
| Total Pulses ... | 2,228 | 2,646 | 418 | 18·7 | ... | ... |
| Tobacco ... ... | 79 | 86 | 7 | 8·9 | ... | ... |
| Sugar-cane ... ... | 68 | 77 | 9 | 13·2 | ... | ... |
| Oil-seeds ... ... | 1,830 | 1,793 | ... | ... | 37 | 2·02 |
| Cotton ... ... | 2,147 | 2,840 | 693 | 32·2 | ... | ... |
| Food crops Total ... | 20,118 | 19,800 | ... | ... | 318 | 1·6 |
| Non-food crops Total ... | 4,364 | 5,000 | 636 | 14·6 | ... | ... |
| Grand Total ... | 24,482 | 24,800 | 318 | 1·3 | ... | ... |

The small diminution in the area of food crops is more than recouped by the extended area of valuable non-food staples. A few comments on the principal crops are not out of place.

**Jowári.**—The decrease is very large in the South Deccan and Karnátak. In all these districts jowári is largely grown as a rabi crop and in the Karnátak as a kharíf crop also. In the former tract it was to a great extent replaced by bájri and cotton. In the latter by cotton. The decrease is further to be accounted for by the more careful registration of row crops grown with early jowári in the Karnátak giving a corresponding increase chiefly in pulses. In spite of the general decrease, Broach shows a fair increase of 10,000 acres, by reason of the excessive rain for cotton. Similarly Ahmadabad is credited with a small increase of 3,500 acres.

| | Thousand Acres. |
|---|---|
| Ahmednagar ... | -197 |
| Poona ... ... | -112 |
| Sholápur ... ... | -325 |
| Belgaum ... ... | -102 |
| Bijapur ... ... | -340 |
| Dhárwár ... ... | -36 |

**Bájri.**—The marginal table bears out the remark made under jowári with respect to Poona and Ahmadnagar and the Karnátak. In Sholápur the area deficient under jowári is made up in part by bájri and cotton and the remainder by pulses which show a large increase. Khándesh and Kaira report a decreased area both of jowári and bájri. In the former cotton covered the deficiency. In the latter the very heavy rains were more favourable for paddy and coarse grains.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... | +199 |
| Poona ... ... | +110 |
| Sholápur ... ... | +182 |

**Paddy.**—Except in Kaira the increase is not considerable, though noticeable also in all districts but Khándesh, Surat and Broach, where an insignificant diminution is reported.

**Wheat.**—The total fall in area is over a lákh of acres or over 5 per cent. generally distributed, but either especially large or else an increase in the marginally noted districts. In these the decreases are made up by larger cotton sowing, while the increases are secured in spite of an increase in cotton also,—a result attributable to the opening out of the country by the Southern Marátha Railway system which has facilitated export and encouraged a larger production of crops in export demand. In Gujarát there is a small increase in 3 districts.

| | Thousand Acres. |
|---|---|
| Násik ... ... | −45 |
| Ahmadnagar ... | −74 |
| Bijápur ... ... | +26 |
| Dhárwár ... ... | +11 |

**Other cereals.**—The increase is chiefly noticeable in the coarse grains. For all these the season was favourable. Kodra is largely grown in Gujarát, especially in Kaira. Rála in the Karnátak and Sátára. Sáwa and Varai in the North Konkan and West Deccan. Rági is grown nearly everywhere except in Broach, Sholápur and Bijápur. The increase under Rála is considerable only in Dhárwár (20,000 acres). Maize holds its large area in the Panch Maháls.

| | Thousand Acres. |
|---|---|
| Kodra ... ... | +14 |
| Rági ... ... | +26 |
| Rála ... ... | +30 |
| Sáwa ... ... | +3 |

**Pulses.**—Tur shows a considerable and gram a moderate increase. It seems very probable that more careful allotment of area between principal and row crops is the chief reason for the increase of tur. But the increase in bájri with which it is chiefly grown in the Deccan is also to be taken into count. Gram shows only a small increase on the whole, with small increases in some districts and similar decreases in others.

| | Thousand Acres. |
|---|---|
| *Tur.* | |
| Bijápur ... ... | +20 |
| Ahmadnagar ... | +31 |
| Poona ... ... | +17 |
| Sholápur ... ... | +43 |
| Sátára ... ... | +9 |
| *Gram.* | |
| Kaira... ... ... | +15 |
| Panch Maháls .. | +13 |

**Tobacco.**—The fair increase is the net result of considerable increases in Broach, Khándesh and Belgaum and Dhárwár, with similar decreases in Ahmadnagar and Bijápur. In the latter district it is explained that the seedlings were damaged by grasshoppers and the land intended for tobacco was sown with cotton (there a late crop) and wheat.

**Sugarcane.**—The increased area of this valuable crop, which is a sure proof of increased agricultural capital, is largest in Poona, where the area is double that of the previous season. There is a respectable rise of about 1,000 acres in both Ahmadabad and Sátára.

**Oil-seeds.**—(1) *Linseed.*—The total decrease in the area under linseed amounts to 25,000 acres or 5·7 per cent. The sowing rains induced a large area in Bijápur and Sholápur, but as will be seen with much loss to the rayats. The large falling off in Khándesh is perhaps due to unsuitability of rain for sowing.

| | Thousand Acres. |
|---|---|
| Khándesh .. .. .. | −72 |
| Belgaum .. .. .. | −3 |
| Dhárwár .. .. .. | −6 |
| Bijápur .. .. .. | +19 |
| Sholápur .. .. .. | +20 |
| Ahmadnagar .. .. | +4 |
| Ahmadabad .. .. .. | +4 |

(2) *Gingelly.*—As in the case of linseed the diminution in area is marked. It is on the whole 20,000 acres. The fluctuations are curious. In Gujarát the Panch Maháls show a fall, but Ahmadabad and Broach a rise. In the Deccan, Khándesh and Poona a fall and Násik and Ahmadnagar an increase. In Thána the allied oil-seed kárla or khurásni (niger-seed) which is classed with gingelly presents a considerable decrease.

| | Thousand Acres. |
|---|---|
| Khándesh ... ... | −43 |
| Násik ... ... | +13 |
| Ahmadabad ... | +9 |
| Broach ... ... | +7 |
| Ahmadnagar ... | +6 |

On the whole oil-seeds have fallen by 2 per cent. Besides linseed and gingelly, kardai or safflower must be specially referred to. It is chiefly grown in the Deccan and Karnátak as a row crop with jowári and wheat and therefore shares the fall of such crops.

**Cotton.**—The large increase of cotton is a special feature of the season under report. The marginal figures are very instructive and explain fully the deficiencies noticed above under other staples. In Broach alone there is a marked decrease fully accounted for by the excessive sowing rain. The crop was sown in places three times over and yet the area was below the total of the previous year. The rayat in a good season increases his cotton sowings and in the year 1886-87 was very unusually successful.

| | Thousand Acres. |
|---|---|
| Khándesh ... ... | +275 |
| Bijápur ... ... | +250 |
| Belgaum ... ... | +45 |
| Ahmadnagar ... | +40 |
| Ahmadabad ... | +39 |
| Dhárwár ... ... | +29 |
| Sholápur ... ... | +21 |
| Násik ... ... | +17 |
| Broach ... ... | −36 |

As regards minor crops it should be noticed that in Sátára 26,000 acres under safflower have been rightly transferred from the class of dyes to that of oil-seeds. The crop is grown both as a dye and as an oil-seed. It is classed in each district accordingly. In Broach, an area of 9,000 acres is returned under "others" under fodder crops in class III. This area is that devoted to the production of grass. I think it is preferable to treat such areas as fallow with the understanding that fallow land always yields grass. Later on when agricultural statistics are better, it may be found advisable to differentiate between regular grass lands and ordinary fallow. But in Broach the grass is not grown in a sufficiently careful manner to entitle the fallows to be considered as cropped land.

The area of jowári, grown not for grain but for fodder either as an early rain crop in Gujarát or as a hot weather irrigated crop in the Deccan and Karnátak, amounts to 16,700 acres. The cultivation of lucerne and guinea grass is confined to cantonment towns where there is a special demand. Lucerne is yet a small crop, 798 acres, chiefly near Poona, Ahmadnagar and Sátára. Guinea grass was grown in 206 acres near Poona and Belgaum.

38. In final elucidation of these remarks and of the detailed tables to be found in the Appendix I add two tables. One shows the distribution of the principal crops in each district including Sind and the other the proportion which the area in each district holds with respect to the gross area of each such crop in the Presidency Proper.

*Percentages of food and other Crops on the gross area cropped in each district.*

| No. | District. | Food Crops. | | | | | | | | | Non-Food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse Grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops | Non-Food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | **A.—Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. .. | 20 | 15 | 6 | 17 | 3 | 1 | 62 | 8 | 1 | 25 | 3 | 1 | 71 | 29 |
| 2 | Kaira .. .. .. .. .. | 10 | 23 | 17 | 4 | 25 | 1 | 80 | 13 | 1 | 1 | 1 | 4 | 94 | 6 |
| 3 | Panch Mahâls .. .. .. .. | 1 | 13 | 15 | 4 | 15 | 21 (Maize). | 69 | 19 | .. | .. | 11 | 1 | 88 | 12 |
| 4 | Broach .. .. .. .. .. | 21 | 2 | 4 | 16 | 1 | .. | 44 | 13 | 2 | 37 | 3 | 1 | 59 | 41 |
| 5 | Surat .. .. .. .. .. | 19 | 1 | 19 | 5 | 9 | .. | 53 | 17 | 2 | 18 | 9 | 1 | 72 | 28 |
| | Average .. | 16 | 12 | 11 | 11 | 9 | 3 | 62 | 12 | 1 | 19 | 5 | 1 | 75 | 25 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. .. | 18 | 19 | 1 | 11 | 1 | .. | 50 | 6 | .. | 33 | 10 | 1 | 56 | 44 |
| 7 | Násik .. .. .. .. .. | 5 | 37 | 2 | 14 | 11 | .. | 69 | 12 | 1 | 1 | 16 | 1 | 82 | 18 |
| 8 | Ahmadnagar .. .. .. .. | 30 | 40 | .. | 8 | 2 | .. | 80 | 11 | .. | 2 | 6 | 1 | 91 | 9 |
| 9 | Poona .. .. .. .. .. | 33 | 35 | 3 | 5 | 5 | .. | 81 | 9 | 1 | 1 | 7 | 1 | 91 | 9 |
| 10 | Sholápur .. .. .. .. .. | 52 | 17 | 1 | 3 | .. | 1 | 74 | 11 | .. | 1 | 12 | 2 | 85 | 15 |
| 11 | Sátára .. .. .. .. .. | 28 | 31 | 2 | 4 | 8 | 1 | 74 | 17 | 1 | 1 | 5 | 2 | 92 | 8 |
| | Average .. | 27 | 29 | 1·5 | 8 | 4 | ·5 | 70 | 11 | 1 | 8 | 9 | 1 | 82 | 18 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. .. | 39 | 10 | 6 | 6 | 9 | .. | 70 | 11 | 1 | 11 | 4 | 3 | 82 | 18 |
| 13 | Bijápur .. .. .. .. .. | 47 | 10 | .. | 7 | 1 | .. | 65 | 9 | .. | 16 | 9 | 1 | 74 | 26 |
| 14 | Dhárwár .. .. .. .. .. | 31 | .. | 7 | 11 | 9 | .. | 58 | 11 | 1 | 24 | 4 | 2 | 70 | 30 |
| | Average .. | 40 | 6 | 4 | 8 | 6 | .. | 64 | 10 | 1 | 17 | 6 | 2 | 75 | 25 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. .. | .. | .. | 62 | .. | 23 | .. | 85 | 9 | 1 | .. | 4 | 1 | 95 | 5 |
| 16 | Kolába .. .. .. .. .. | .. | .. | 54 | .. | 37 | .. | 91 | 6 | 1 | .. | 2 | .. | 98 | 2 |
| 17 | Ratnágiri .. .. .. .. .. | Not received. | | | | | | | | | | | | | |
| 18 | Kánara .. .. .. .. .. | .. | .. | 79 | .. | 3 | .. | 82 | 3 | 10 | .. | .. | 5 | 95 | 5 |
| | Average .. | .. | .. | 62 | .. | 24 | .. | 86 | 7 | 3 | .. | 3 | 1 | 96 | 4 |
| | Average A. .. | 27 | 20 | 6 | 8 | 6 | 1 | 68 | 11 | 1 | 11 | 8 | 1 | 80 | 20 |
| | **B.—Sind.** | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. .. .. | 18 | 5 | 37 | 15 | .. | 2 | 77 | 7 | 1 | .. | 12 | 3 | 85 | 15 |
| 20 | Hyderabad .. .. .. .. .. | 16 | 35 | 16 | 5 | .. | .. | 72 | 3 | 3 | 10 | 10 | 2 | 78 | 22 |
| 21 | Shikárpur .. .. .. .. .. | 26 | 1 | 36 | 17 | .. | .. | 80 | 10 | 2 | 1 | 6 | 1 | 92 | 8 |
| 22 | Upper Sind Frontier .. .. .. | 48 | 2 | 8 | 6 | .. | .. | 64 | 6 | 1 | 1 | 28 | .. | 71 | 29 |
| 23 | Thár and Párkar .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Average B. .. | 23 | 13 | 27 | 11 | .. | 1 | 75 | 7 | 2 | 4 | 10 | 2 | 84 | 16 |
| | Average for the Presidency .. | 27 | 19 | 8 | 8 | 6 | 1 | 69 | 10 | 1 | 11 | 7 | 2 | 80 | 20 |

*Percentages of food and other crops on the gross area under each in the Presidency Proper.*

| Number. | District. | Food Crops. | | | | | | | | | Non-Food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops | Non-Food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. .. | 4·2 | 4·4 | 5·5 | 12·2 | 2·9 | 12·2 | 5·3 | 4·3 | 6·8 | 12·6 | 2·7 | 2·2 | 5·1 | 8·3 |
| 2 | Kaira .. .. .. .. .. | 1·0 | 3·4 | 8·3 | 1·3 | 12·4 | 5·1 | 3·3 | 3·8 | 4·5 | 0·3 | 0·6 | 7·4 | 3·6 | 0·9 |
| 3 | Panch Mahále .. .. .. .. | .. | 0·8 | 3·2 | 0·6 | 3·3 | 41·6 | 1·4 | 2·4 | 0·6 | .. | 1·9 | 1·0 | 1·5 | 0·8 |
| 4 | Broach .. .. .. .. .. | 1·8 | 0·2 | 1·4 | 4·7 | 0·6 | .. | 1·5 | 2·7 | 5·6 | 7·3 | 1·0 | 1·1 | 1·7 | 4·6 |
| 5 | Surat .. .. .. .. ... | 1·5 | 0·1 | 6·6 | 1·5 | 3·2 | 0·6 | 1·8 | 3·6 | 4·8 | 3·4 | 2·6 | 1·4 | 2·0 | 3·0 |
| | Total .. | 8·5 | 8·9 | 25·0 | 20·3 | 22·4 | 59·5 | 13·3 | 16·8 | 22·3 | 23·6 | 8·8 | 13·1 | 13·9 | 17·6 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. .. | 7·6 | 11·5 | 1·2 | 16·0 | 1·5 | 1·6 | 8·5 | 7·0 | 5·0 | 33·2 | 15·0 | 11·0 | 8·3 | 25·1 |
| 7 | Násik .. .. .. .. .. | 1·4 | 14·7 | 3·1 | 14·3 | 14·4 | 2·2 | 8·0 | 9·0 | 8·6 | 0·6 | 17·1 | 3·0 | 8·2 | 6·7 |
| 8 | Ahmadnagar .. .. .. .. | 11·5 | 21·6 | 0·6 | 11·2 | 2·6 | 3·2 | 12·6 | 11·0 | 4·1 | 2·1 | 8·6 | 6·6 | 12·2 | 4·8 |
| 9 | Poona .. .. .. .. .. | 10·5 | 15·5 | 3·7 | 5·4 | 6·9 | 6·6 | 10·3 | 7·1 | 13·3 | 0·3 | 8·5 | 6·3 | 9·9 | 3·7 |
| 10 | Sholápur .. .. .. .. .. | 15·6 | 7·1 | 1·3 | 2·9 | 0·1 | 13·0 | 9·0 | 9·0 | 3·6 | 1·1 | 13·5 | 11·3 | 8·9 | 6·1 |
| 11 | Sátára .. .. .. .. . | 7·6 | 11·8 | 2·7 | 3·6 | 10·2 | 9·7 | 8·2 | 12·2 | 10·3 | 0·4 | 5·3 | 11·2 | 8·7 | 3·0 |
| | Total .. | 54·2 | 82·2 | 12·6 | 53·4 | 35·7 | 36·3 | 56·6 | 55·3 | 44·9 | 37·7 | 68·0 | 49·4 | 56·2 | 49·4 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. .. | 10·1 | 3·3 | 6·9 | 5·4 | 10·7 | 3·8 | 7·3 | 7·6 | 8·2 | 6·6 | 4·2 | 14·0 | 7·3 | 6·3 |
| 13 | Bijápur ... .. .. .. .. | 17·8 | 5·5 | 0·6 | 9·0 | 2·2 | 0·4 | 10·0 | 8·9 | 3·2 | 14·8 | 12·8 | 5·5 | 9·8 | 13·3 |
| 14 | Dhárwár .. .. .. .. .. | 9·4 | 0·1 | 9·6 | 11·9 | 11·4 | .. | 7·0 | 8·5 | 6·9 | 17·3 | 4·6 | 13·3 | 7·3 | 12·5 |
| | Total .. | 37·3 | 8·9 | 17·1 | 26·3 | 24·3 | 4·2 | 24·3 | 25·0 | 18·3 | 38·7 | 21·6 | 32·8 | 24·4 | 32·1 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. .. | .. | .. | 21·2 | .. | 8·0 | .. | 2·7 | 1·7 | 3·2 | .. | 1·2 | 1·8 | 2·5 | 0·6 |
| 16 | Kolába .. .. .. ... .. | .. | .. | 12·7 | .. | 9·2 | .. | 2·0 | 1·0 | 1·1 | .. | 0·4 | 0·2 | 1·9 | 0·1 |
| 17 | Ratnágiri .. .. .. .. .. | Not | receiv | ed. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 18 | Kánara .. .. .. .. .. | .. | .. | 11·4 | .. | 0·4 | .. | 1·1 | 0·2 | 10·2 | ... | .. | 2·7 | 1·1 | 0·2 |
| | Total .. | .. | .. | 45·3 | .. | 17·6 | .. | 5·8 | 2·9 | 14·5 | .. | 1·6 | 4·7 | 5·5 | 0·9 |
| | .. | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

39. **Outturn of Crops.**—This vital question in spite of its importance can only be touched on very lightly. It is of immense difficulty. I have endeavoured to digest the information received and to summarize the results in the following abstract:—

*Approximate Anna-valuation of Crops in each District, 1886-87.*

| No. | District. | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Rági. | Varai. | Tur. | Gram. | Cotton. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *I.—Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 9 | 12 | 13 | 10 | 12 | 11 | 12 | 7 | 5 | 12 |
| 2 | Kaira ... ... ... ... | 12 | 10 | 14 | 10 | 13 | 10 | ... | 11 | 8 | 6 |
| | ch Maháls ... ... ... | 7 | 12 | 9 | 8 | 11 | 14 | 11 | 10 | 9 | ... |
| | ch ... ... ... ... | 8 | 4 | 7 | 9 | 8 | ... | 11 | 7 | 7 | 9 |
| | t ... ... ... ... | 13 | 7 | 12 | 10 | 13 | 12 | ... | 11 | 7 | 7 |
| | *II.—Deccan.* | | | | | | | | | | |
| | lesh ... ... ... | 12 | 14 | 13 | 16 | 11 | 11 | ... | 11 | 13 | 15 |
| | ... ... ... ... | 14 | 13 | 14 | 13 | ... | 16 | 18 | 8 | 13 | 15 |
| | nagar ... ... ... | 13 | 12 | 13 | 11 | ... | 16 | 13 | 14 | 11 | 8 |
| | ... ... ... ... | 15 | 13 | 14 | 14 | ... | 15 | 14 | 10 | 14 | 5 |
| | ... ... ... | 12 | 8 | 11 | 11 | ... | ... | 13 | 14 | 12 | 4 |
| | .. ... ... ... | 14 | 15 | 13 | 13 | ... | 13 | 13 | 14 | 15 | 7 |
| | —*Karnátak.* | | | | | | | | | | |
| | ... ... ... | 10 | 11 | 9 | 11 | ... | 12 | 10 | 9 | 9 | 8 |
| | ... ... ... | 14 | 12 | 13 | 9 | ... | ... | ... | 15 | 12 | 12 |
| | ... ... ... | 12 | 10 | 9 | 13 | 16 | 15 | 12 | 10 | 10 | 10 |
| | —*Konkan.* | | | | | | | | | | |
| | ... ... ... | ... | ... | 16 | ... | 13 | 16 | 16 | 6 | 9 | ... |
| | ... ... ... | ... | ... | 13 | ... | 15 | 16 | 15 | 13 | 14 | ... |
| | ... ... ... | Not | receive | d. | | | | | | | |
| | ... ... ... | 13 | ... | 12 | ... | ... | 13 | ... | 13 | 11 | ... |

table the valuations are calculated on the standard by which 16 annas represent an average crop.

season was favourable for jowári, bájri and the minor cereals. The injured bájri which had been cut especially in the East Deccan. everywhere by reason of the break in September at a time when oisture was needed. The after (Hast) rains in October, though

plentiful, were too late to improve this crop. Wheat, gram and other late crops were put into the ground with favourable rain, but the yield was largely diminished by frost in Gujarát and excessive cold and high east winds in the Deccan and Karnátak. The general failure of linseed in the Deccan where the area was so large and early prospects so bright, caused great disappointment and loss. Cotton though suffering from the vicissitudes of the season, on the whole gave a good crop in Khándesh, Bijápur, Dhárwár and Ahmadabad, the principal cotton tracts. Elsewhere it was poor. The abundant rains caused a plentiful supply of fodder in the by-products of the cereals and pulses and in the yield of grass on fallow and grass lands.

41. An attempt has been made for the first time to register the number of fruit-bearing trees in occupied and waste land out of forest areas (*vide* appended return, p. xix). I fancy that the enumeration is very rough but it may be well to summarize here the reported figures. Some idea of the distribution at any rate is given. In any estimate of the food outturn of the Presidency, the increment afforded by mangoes, jack fruit and the like cannot be neglected. Such fruit trees as plantains, guavas and the like are included under the garden area, inasmuch as they are grown in set definable areas :—

*Number of fruit-bearing trees in thousands.*

| Province. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy Palm. | Date Palm. |
|---|---|---|---|---|---|---|
| Gujarát ... ... ... | 425 | 108 | 3 | 6 | 194 | 776 |
| Deccan ... ... ... | 605 | 46 | 8 | 3 | 6 | 63 |
| Karnátak ... ... ... | 315 | 92 | 17 | 54 | ... | 704 |
| Konkan ... ... ... | 317 | 28 | 128 | 1,125 | 75 | 13 |
| Total ... | 1,662 | 274 | 156 | 1,188 | 275 | 1,556 |

This return shows that mango and tamarind grow all over the Presidency proper, jack fruit principally in Surat, Sátára, Belgaum, Dhárwár and the Konkan. Cocoa palms in Surat, the Karnátak and the Konkan. Toddy palms in South Gujarát, Poona and North Konkan and date palms in Surat, Násik, Bijápur and Dhárwár.

| | Thousand. | | Thousand. |
|---|---|---|---|
| *Coffee.* | | | |
| Belgaum ... | 5 | Thána... ... | 6 |
| *Betel-nut.* | | *Ráyan.* | |
| Ratnágiri .. | 231 | North Gujarát. | 56 |
| *Keshew-nut.* | | *Moha.* | |
| Ratnágiri ... | 43 | North Gujarát. | 86 |
| Kánara ... | 60 | Khándesh ... | 41 |

Some districts add to the list the enumeration of other fruit trees of especial local importance. This list is incomplete.

**Return No. IV.—Irrigation.**

42. In Kánara the error made last year in returning the whole crop as irrigated is rectified. Taking for comparison the figures for the two Kánara as unaltered, the area under irrigation shows a decrease of 81,000 9·7 per cent. of which 15,000 acres belong irrigation and the rest to other sources. The most conspicuous in the marginally named di correctly attributed to the seasonableness and of the monsoon rains. Sugarcane exhibits of 4,000 acres. It is chiefly grown under District details are to be found in the ta appendix.

| | Thousand acres. |
|---|---|
| Ahmadabad ... | 17 |
| Ahmadnagar ... | 30 |
| Poona ... ... | 13 |
| Belgaum ... | 12 |

43. Akin to the information supplied regarding the irrigated ar of water-supply (Return No. VI., p. xviii) which for the first time aim the character of the irrigation in each district. This is intended quennial return. Its prime object is to record at sufficiently nume the progress made in well irrigation and to gauge the effect of the po ment directed towards encouragement of this important means of food supply and of protecting the country against drought. I fear cannot be considered very accurate. It may be found necessa

similar one for 1888-89 when more accuracy will be possible and to count the 5-year intervals from that year instead of from 1886-87. On this point a reference will be made in due course to Government.

**Return No. V.—Agricultural Stock.**

44. This most important return is now submitted in the form prescribed by the Revised Manual. It is a great improvement on the old form. Agricultural cattle are shown separately from those which are not kept for purposes of cultivation or irrigation. Some information as to breeding cattle is given and valuable details as to the extent of the utilization of he-buffaloes for cultivation. Sheep and goats are shown separately. By providing columns for young stock the old common error of omitting them altogether is avoided. It would be desirable if this form were adopted for all India, unless a more perfect one can be suggested.

I will not venture on comparing in detail the figures returned with those of the former year for three reasons :—

1, because the form is different,

2, because till now the area for which the figures were returned was varying and undefined, and

3, because the following rule—one of great importance—was not prescribed that animals though temporarily absent at the time of the annual census on grazing grounds or elsewhere should be registered in the village to which they belong, and on the other hand that animals belonging to other villages should be excluded from enumeration in the villages where they may be for the time.

Subject, however, to these remarks I may say generally that the returns show a very considerable increase (in the rayatwári area, *i. e.* that area which gives the most trustworthy statistics). Cattle show an increase of 8½ lákhs or 14 per cent., an increase distributed throughout the Presidency proper. Fodder was plentiful everywhere and though there were local losses from disease no outbreak was formidable enough to materially affect the district figures. Sheep and goats an increase of 1½ lákhs, similarly distributed. Ploughs a similar increase, but with variations in classification between large ploughs and those drawn by one pair of oxen only. Carts an increase in the aggregate, but a decrease in those not used in carrying loads, a discrepancy due to reclassification under the revised orders.

The return discloses the following facts :—

1, that he-buffaloes are not used as plough-cattle in Gujarát except in the south tracts which border on the Konkan ;

2, that large ploughs are not used in the Konkan and seldom in Gujarát, while on the other hand small 2-bullock ploughs are unknown in Sholápur ;

3, that sheep are generally more numerous (proportion 5 to 3) than goats except in the Panch Maháls, Khándesh and the Konkan.

following table shows (1) the proportion of bulls kept for breeding to cows, and (2) the percentage of milch cattle on the total cattle in the area for each province except Sind :—

| Province. | Proportion of bulls to cows. | Percentage of milch cattle on total cattle. |
|---|---|---|
| Gujarát ... | 1 to 120 | 36·3 |
| Deccan ... | 1 to 104 | 34·8 |
| Karnátak ... | 1 to 56 | 31·2 |
| Konkan ... | 1 to 33 | 33·1 |
| Total ... | 1 to 73 | 34·1 |

I give the above for what it is worth. It would seem that in Gujarát less care than elsewhere is taken to keep bulls for breeding, but this conclusion is against known facts. The percentage of milch cattle on the gross number of cattle is remarkably regular.

The figures give the materials for the table below. The results prove a fair accuracy, for they correspond with deductions drawn from general observation and knowledge of the country.

*Gross cropped area per pair plough cattle.*

| | District. | Acres. | | District. | Acres. |
|---|---|---|---|---|---|
| Gujarát. | Ahmadabad ... | 17·4 | Deccan. | Khándesh ... | 17·7 |
| | Kaira ... ... | 12·0 | | Násik ... ... | 17·2 |
| | Panch Maháls ... | 10·2 | | Ahmadnagar ... | 19·5 |
| | Broach ... ... | 18·9 | | Poona ... ... | 16·3 |
| | Surat ... ... | 10·0 | | Sholápur ... | 19·1 |
| | | | | Sátára ... ... | 15·2 |
| | Average ... | 13·3 | | Average ... | 17·5 |
| Konkan. | Thána ... ... | 6·2 | Karnátak. | Belgaum ... | 16·8 |
| | Kolába ... ... | 6·8 | | Bijápur ... | 27·7 |
| | Ratnágiri ... | 5·2 | | Dhárwár ... | 18·2 |
| | Kánara ... ... | 4·7 | | | |
| | Average ... | 5·8 | | Average ... | 20·6 |

45. A special enquiry was directed by Government (Government Resolution No. 3253, dated 25th May 1887) into the decrease, apparent from last year's returns in some districts, of sheep and goats. Special reports were obtained from the Collectors and every endeavour was made to arrive at a satisfactory conclusion on the main fact at issue, whether the decrease was real or due to faulty registration. The reports give no explanation or elucidation, but are merely surmises based on the figures available. I need only refer to the remarks made above on the inutility of comparing the figures reported one year with those of another. There is no reason to suppose that sheep and goats have decreased as was apprehended. On the other hand, the present returns point to an increase over last year. There may be in places a decrease, but it is not probable. It would serve no purpose to dilate further on the subject. Future comparisons will be more valuable, especially if the returns are criticized by the Collectors in the light of administrative action, such as curtailment or enlargement of grazing areas and the like and with local knowledge as to the effect of epidemics and any scarcity or plentifulness of fodder, before they are submitted for compilation in the annual returns for the Presidency.

*B.—Rainfall.*

46. The transfer of the duty of compiling rainfall returns to the Agr[illegible] Department (last Report, paragraph 131) has enabled me to give this ye[illegible] plete analysis of all the districts in the Presidency proper. The numb[illegible] gauge stations too is more representative and complete, the record sh[illegible] fall at each táluka and petha town. The rainfall tables, together with [illegible] remarks appended showing the characteristics of the season and cro[illegible] more important now that the annual season report from the Divisiona[illegible] sioners has been discontinued (Government Resolution No. 6758, [illegible] October 1887).

Season of 1886-87.

The chief characteristics of the year under report were that t[illegible] monsoon broke earlier than usual; t[illegible] was generally seasonable though t[illegible] excessive, especially in the Konkan and Gujarát; that the [illegible] second half of August was favourable throughout, but that of Pu[illegible] in September except in East Deccan and Karnátak badly defic[illegible]

breaks were injuriously protracted, particularly for rice in the Konkan and Gujarát; and that relief came early in October with Hast, but was too late to improve rice which was everywhere a poor crop. The late rains were very favourable for rabi crops, but these were affected to a more or less extent by excessive cold and frost in February which was severe in Gujarát. On the whole the season was good and fodder plentiful.

Season of 1887-88.

As regards the current season monthly returns of rainfall with explanatory remarks as to the condition of crops have up to date been published by me in the Government Gazette. The reports show that the season has been on the whole fairly good, though the heaviness of the early rain and the earlier closure of the south-west monsoon will affect the outturn of late sown kharíf crops, and that the area under rabi will be short.

A complete record of the monthly rainfall for the last eleven years at all stations has been prepared, with a view to strike trustworthy averages. These are shown in the published returns. It has also been arranged with the Survey and Settlement Commissioner that the Settlement officers shall henceforth indent on my office for the rain statements to accompany their reports.

*C.—Crop Experiments.*

Wheat 18; Jowári 12; Rice 13; Gram 8; Bájri 5; Sugarcane 2; Linseed 1; Maize 1; Vari 1; and Nágli 1; total 62.

47. The number of experiments made in 1886-87 was 62 as shown in the margin against 31 in 1885-86, the increase being due to the orders of Government directing that in each district two ordinary experiments, each on the staple crops, or one special experiment in lieu of them should be made by each Assistant and District Deputy Collector in charge of tálukas. A separate report has been, as usual, submitted to Government regarding these experiments.

## VIII.—TRADE AND TRADE STATISTICS.

48. The Rail-borne and Road Traffic Report prepared by the Examiner of Guaranteed Railway Accounts was reviewed and submitted to Government with this office No. 1677, dated 23rd September 1887. The following is a brief summary of the Report.

*Rail-borne Trade.*—In round numbers the figures show a considerable increase both in the total trade and in the recorded value—the increase in the trade being 8 million maunds and that in the value about 7 crores of rupees. Imports and exports, *i. e.* trade with the external blocks, make up 57 per cent. of the total. The remainder 43 per cent., represents the local trade or trade of internal blocks *inter se.*

| | 1885-86. | 1886-87. |
|---|---|---|
| Imports... ... ... | 31 | 32 |
| Exports... ... ... | 10 | 12 |
| Local Trade ... ... | 28 | 33 |
| Total MillionMaunds... | 69 | 77 |

ubjoined statement shows the chief imports into, and exports from, y Presidency:—

| y Presidency from Sind est of India. | Maunds. | Exports from Bombay Presidency to Sind and the rest of India. | Maunds. |
|---|---|---|---|
| ... ... | 14,392,379 | Salt ... ... ... | 3,644,491 |
| ... ... | 3,034,529 | Railway Plant ... ... | 2,948,506 |
| ... ... | 6,791,285 | Metals ... ... ... | 1,102,722 |
| ... ... | 3,422,027 | Coal ... ... ... | 856,347 |
| ... ... | 428,856 | Cotton Piece-goods (European) ... | 645,256 |
| ... ... | 325,075 | Cotton Piece-goods (Indian) ... | 167,752 |
| ... ... | 118,147 | Provisions (dried fruit and nuts) ... | 431,010 |
| ... | 103,392 | Sugar ... ... ... | 367,860 |
| ... | 77,264 | Kerosine Oil ... ... | 265,062 |
| ... | 3,057,523 | Tobacco .. ... ... | 250,933 |
| | | Jute, gunny bags and cloth ... | 241,163 |
| | | Other ... ... ... | 1,655,978 |
| Total ... | 31,750,477 | Total ... | 12,577,080 |

About 88 per cent. of the imports are received by the Bombay Town alone, and are chiefly for export beyond the seas. Grains show only a slight increase. Of the total imports ($17\frac{1}{2}$ million maunds) wheat is credited with about $14\frac{1}{2}$ millions and is principally received as indicated marginally. Thus though there is only a slight increase on the total imports of grains, wheat alone shows an increase of one million. On the other hand oil-seeds show a decrease of more than one million maunds due to lessened receipts of linseed from the Central Provinces, Berár and the Nizám's Territory and of mustard and rape from the Punjáb, the Central Provinces and Berár. The imports of cotton show an increase, which is greater than the decrease in oil-seeds. Half the cotton comes from Berár, and the rest mostly from the N.-W. Provinces and Oudh and from Rajputána and Central India.

| | |
|---|---|
| Punjáb ... ... ... | 1 |
| Rajputána and Central India | 2·4 |
| N.-W. Provinces and Oudh . | 1·3 |
| Central Provinces ... ... | 7·6 |
| Berár... ... ... ... | 2 |
| Total ... | 14·3 |

Of the 12 million maunds of exports $3\frac{1}{2}$ millions were credited to salt against 4 millions in the previous year. In order of importance the other chief exports were railway plant and rolling stock, metals, cotton piece-goods, dried fruit, sugar and kerosine oil, *i.e.* articles mostly from foreign ports shipped to Bombay for up-country demand. Salt went chiefly to the Central Provinces and to the N.-W. Provinces and Oudh, railway plant and rolling stock to Rajputána and Central India. The export of tobacco from Gujarát and Káthiáwár to Rajputána and Central India increased by about 40 per cent.

*Local Trade by Rail.*—Of the 33 million maunds included under this head, Bombay Town received $15\frac{3}{4}$ and sent out $10\frac{3}{4}$ millions. The receipts were chiefly grains ($6\frac{1}{4}$ including wheat $4\frac{1}{2}$), cotton and cotton goods (3) and oil-seeds and oil ($3\frac{1}{4}$ million maunds). Bombay despatched 4 million maunds of coal and $2\frac{1}{4}$ million maunds of railway plant and rolling stock. As noticed last year the cotton trade on the Southern Marátha Railway increased during the year from 67,000 to 259,000 maunds, or about 4 times. Of these the exports to Bombay Town amounted to 203,000 maunds, while 56,000 maunds went to Madras, which is a new feature in trade during the year.

The following is a short analysis of the trade in important export staples :—

The import and local trade in cotton, wheat and oil-seeds, which are the chief articles of export to Europe, is almost all centered in Bombay Town. The export trade in these articles, *i. e.* to external blocks, is insignificant. During the year under report the total trade in cotton and wheat shows a marked improvement, while that in oil-seeds, chiefly linseed, mustard, and rape, shows a considerable falling off. The total trade in cotton rose from $47\frac{1}{2}$ lákhs of maunds to $65\frac{1}{4}$ or by 37·4 per cent., the increase being 23·2 per cent. in imports and 14·2 per cent. in local trade ; similarly the trade in wheat increased from 156 to $189\frac{1}{4}$ lákhs or by 21·3 per cent., the increase being 4·8 per cent. in imports [illegible] in local trade. The season both for cotton and wheat was good in the P[illegible] It is important to notice that the development of the wheat trade does [illegible] to have affected the produce of other food crops in the Presidency. [illegible] trade in jowári and bájri increased from $4\frac{1}{2}$ lákhs to $16\frac{1}{2}$ lákhs or [illegible] cent. The season, especially in the Deccan and Karnátak, was als[illegible] to these staples.

As regards oil-seeds, the season in the Presidency was very un[illegible] linseed, which is the principal oil-seed exported from Bombay. [illegible] for the large decrease (from 16 to $9\frac{1}{2}$ lákhs) in the local trade.

The exports by sea from Bombay during the year amounted [illegible] maunds of cotton or 89 per cent. of the total cotton imports in[illegible] from external and internal blocks ; to 173 lákhs of wheat or [illegible] total wheat imports and to $80\frac{3}{4}$ lákhs of linseed, mustard [illegible] or 92 per cent. of the total oil-seed imports. Compared wit[illegible] correspond with the imports in showing an increase as regar[illegible] and a decrease as regards oil-seeds (except gingelly).

The following statement shows the details :—

| Produce. | | Imports. (Maunds.) | | Local Trade (chiefly Imports into Bombay). (Maunds.) | | Total Imports and Local Trade. (Maunds). | | Exports by Sea from Bombay Port. (Maunds.) |
|---|---|---|---|---|---|---|---|---|
| | | Total. | Into Bombay Port. | Total. | Into Bombay Port. | Total. | Into Bombay Port. | |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Cotton ... | 1886.. | 23,31,210 | 22,78,733 | 24,14,568 | 22,78,810 | 47,45,778 | 45,57,543 | 44,41,869 |
| | 1887... | 34,22,027 | 32,56,628 | 31,10,132 | 29,90,834 | 65,32,159 | 62,47,462 | 55,80,331 |
| | + or − | +10,90,817 | +9,77,895 | +6,95,564 | +7,12,024 | +17,86,381 | +16,89,919 | +11,38,462 |
| Wheat .. | 1886... | 1,36,36,728 | 1,35,75,493 | 19,63,536 | 17,41,005 | 1,56,00,264 | 1,53,16,498 | 1,44,56,379 |
| | 1887.. | 1,43,92,379 | 1,42,75,020 | 45,39,252 | 44,32,903 | 1,89,31,631 | 1,87,07,923 | 1,73,07,569 |
| | + or − | +7,55,651 | +6,99,527 | +25,75,716 | +26,91,898 | +33,31,367 | +33,91,425 | +28,51,190 |
| Linseed ... | 1886... | 48,89,551 | 48,89,339 | 16,20,476 | 16,18,112 | 65,10,027 | 65,07,451 | 69,66,843 |
| | 1887... | 39,38,557 | 39,34,302 | 9,60,618 | 9,59,243 | 48,99,175 | 48,93,545 | 43,93,432 |
| | + or − | −9,50,994 | −9,55,037 | −6,59,858 | −6,58,869 | −16,10,852 | −16,13,906 | −25,73,411 |
| Mustard and Rape. | 1886... | 14,89,441 | 14,88,720 | 9,37,578 | 9,35,710 | 24,27,019 | 24,24,430 | 25,36,796 |
| | 1887... | 10,58,599 | 10,57,219 | 8,33,322 | 8,30,337 | 18,91,921 | 18,87,556 | 19,49,529 |
| | + or − | −4,30,842 | −4,31,501 | −1,04,256 | −1,05,373 | −5,35,098 | −5,36,874 | −5,87,267 |
| Gingelly ... | 1886... | 11,31,091 | 10,16,443 | 6,33,700 | 5,22,956 | 17,64,791 | 15,39,399 | 14,40,369 |
| | 1887... | 15,18,411 | 14,72,435 | 6,58,548 | 5,51,675 | 21,76,959 | 20,24,110 | 17,23,450 |
| | + or − | +3,87,320 | +4,55,992 | +24,848 | +28,719 | +4,12,168 | +4,84,711 | −2,83,081 |

The total in column 7 does not include the imports by sea from Káthiáwár and South Konkan ports, which are now, however, comparatively insignificant owing to the extension of the railway. The exports by sea in column 8 are taken from the weekly returns printed by the Chamber of Commerce.

*Road-borne Trade.*—The total road-borne traffic registered amounted to 4¼ million maunds compared with 4½ millions of the previous year. Of this amount the imports made up 82 per cent. against 83 in the last year. This trade is practically the traffic with Native States and the figures need not be taken as absolutely representing the trade over and above the rail-borne trade of the Presidency, as much of it is again registered as local rail-borne traffic. With a view to effect a saving, the registration of the road traffic is now carried on under the direction of the Director of Land Records and Agriculture on a modified plan as sanctioned in Government Resolution No. 8352, dated 26th November 1886 (Revenue Department).

**Conclusion.**

49. I have endeavoured to curtail the report in the direction ordered by the Government of India, but have admitted a review of Agricultural Statistics, because this is the only place for such review. I venture to think that this action is in accordance with the wishes of the Supreme Government. The report also contains under special orders from Government a somewhat detailed summary of the outbreaks of cattle disease and the measures adopted for their suppression.

Mr. Muir-Mackenzie of the Civil Service has completed his course at the Royal Agricultural College, Cirencester, and has returned to India. He not only took the first place in the final Diploma Examination, securing the Gold Medal, but also took a very high place in the annual examination for the Diploma of the Royal Agricultural Society of England.

I have the honour to be,
Sir,
Your most obedient Servant,

E. C. OZANNE,
Director, Land Records and Agriculture, Bombay.

# STATISTICS.

## A.—AGRICULTURAL.

I.—Area of Available Statistics.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

VI.—Sources of Water Supply.

Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1886-87.

| No. | District. | Number and Area of Villages exclusive of Foreign Territory, Feudatory and Tributary States. | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Surveyed other Government. | | Surveyed alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmedabad .. .. .. | 832 | 2,319,163 | 52 | 123,518 | 884 | 2,442,681 | 448 | 1,057,012 | 384 | 1,262,151 | 41 | 104,821 | 873 | 2,423,984 | .. | .... | 11 | 18,697 | 11 | 18,697 |
| 2 | Kaira .. .. .. .. | 563 | 994,255 | 28 | 27,464 | 591 | 1,021,719 | 436 | 757,834 | 90 | 174,648 | .. | .... | 526 | 932,482 | 37 | 61,773 | 28 | 27,464 | 65 | 89,237 |
| 3 | Panch Maháls .. .. .. | 610½ | 900,470 | 139½ | 127,270 | 750 | 1,027,740 | 424 | 666,659 | 90½ | 99,376 | 24 | 27,639 | 538½ | 793,674 | 96 | 134,435 | 115½ | 99,631 | 211½ | 234,066 |
| 4 | Broach .. .. .. .. | 408 | 917,683 | 15 | 18,724 | 423 | 936,407 | 407 | 916,504 | 1 | 1,179 | .. | .... | 408 | 917,683 | .. | .... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat .. .. .. .. | 820½ | 1,027,231 | 32½ | 31,055 | 853 | 1,058,286 | 810½ | 1,014,996 | 10 | 12,235 | 4½ | 5,254 | 825 | 1,032,485 | .. | .... | 28 | 25,801 | 28 | 25,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. | 3,223 | 5,496,383 | 111½ | 198,547 | 3,334½ | 5,694,930 | 2,672½ | 4,614,218 | 140 | 279,440 | 63½ | 103,372 | 2,876 | 4,997,030 | 410½ | 602,725 | 48 | 95,175 | 458½ | 697,900 |
| 7 | Násik .. .. .. .. | 1,512 | 3,398,011 | 184 | 297,024 | 1,696 | 3,695,035 | 1,500 | 3,395,131 | .. | .... | 80 | 167,698 | 1,580 | 3,562,829 | 12 | 2,880 | 104 | 129,326 | 116 | 132,206 |
| 8 | Ahmednagar .. .. .. | 1,291½ | 3,933,757 | 81½ | 293,662 | 1,373 | 4,227,419 | 1,222 | 3,675,790 | 59½ | 282,128 | 53 | 221,819 | 1,334½ | 4,129,737 | 10 | 25,839 | 28½ | 71,843 | 38½ | 97,682 |
| 9 | Poona .. .. .. .. | 1,001¾ | 2,868,769 | 202¼ | 507,374 | 1,204 | 3,376,143 | 993¾ | 2,867,126 | .. | .... | 161¼ | 469,608 | 1,160 | 3,336,734 | 3 | 1,643 | 41 | 37,766 | 44 | 39,409 |
| 10 | Sholápur .. .. .. .. | 665 | 2,697,959 | 52 | 208,407 | 717 | 2,906,366 | 665 | 2,697,959 | .. | .... | 32 | 124,156 | 697 | 2,822,115 | .. | .... | 20 | 84,251 | 20 | 84,251 |
| 11 | Sátára .. .. .. .. | 960 | 2,454,778 | 394 | 625,807 | 1,354 | 3,080,585 | 960 | 2,454,778 | .. | .... | 265 | 494,497 | 1,225 | 2,949,275 | .. | .... | 129 | 131,310 | 129 | 131,310 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. | 892 | 2,276,064 | 241 | 545,387 | 1,133 | 2,821,451 | 892 | 2,276,064 | .. | .... | 183 | 540,039 | 1,075 | 2,816,103 | .. | .... | 58 | 5,348 | 58 | 5,348 |
| 13 | Bijápur .. .. .. .. | 1,011 | 3,205,699 | 162 | 420,804 | 1,173 | 3,626,503 | 1,011 | 3,205,699 | .. | .... | 154 | 387,063 | 1,165 | 3,592,762 | .. | .... | 8 | 33,741 | 8 | 33,741 |
| 14 | Dhárwár .. .. .. .. | 1,289 | 2,689,126 | 184 | 256,577 | 1,473 | 2,945,703 | 1,288 | 2,687,961 | 1 | 1,165 | 137 | 180,902 | 1,426 | 2,870,028 | .. | .... | 47 | 75,675 | 47 | 75,675 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | 1,881 | 2,390,324 | 103 | 79,533 | 1,984 | 2,469,857 | 1,862 | 2,379,035 | 5 | 3,847 | 26 | 31,821 | 1,893 | 2,414,703 | 14 | 7,442 | 77 | 47,712 | 91 | 55,154 |
| 16 | Kolába .. .. .. .. | 1,264 | 1,100,365 | 80 | 30,461 | 1,344 | 1,130,826 | 762 | 570,718 | 500 | 529,573 | 6 | 3,466 | 1,268 | 1,103,757 | 2 | 74 | 74 | 26,995 | 76 | 27,069 |
| 17 | Ratnágiri .. .. .. .. | 1,273½ | 2,384,539 | 63 | 128,890 | 1,336½ | 2,513,429 | 52½ | 122,427 | 942 | 1,624,120 | 14 | 28,580 | 1,008½ | 1,775,127 | 279 | 637,992 | 49 | 100,310 | 328 | 738,302 |
| 18 | Kánara .. .. .. .. | 1,332 | 2,502,400 | .. | .... | 1,332 | 2,502,400 | 1,223 | 2,296,956 | .. | .... | .. | .... | 1,223 | 2,296,956 | 109 | 205,444 | .. | .... | 109 | 205,444 |
| | Total A. ... | 20,829¾ | 43,556,976 | 2,125¼ | 3,920,504 | 22,955 | 47,477,480 | 17,634¼ | 37,656,867 | 2,223 | 4,219,862 | 1,244¼ | 2,890,735 | 21,101½ | 44,767,464 | 972½ | 1,680,247 | 881 | 1,029,769 | 1,853½ | 2,710,016 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. .. | 707 | 4,402,426 | 15 | 44,666 | 722 | 4,447,092 | 347 | 1,714,432 | .. | .... | .. | .... | 347 | 1,714,432 | 360 | 2,687,994 | 15 | 44,666 | 375 | 2,732,660 |
| 20 | Hyderabad .. .. .. .. | 1,203 | 5,375,860 | 56 | 240,845 | 1,259 | 5,616,705 | 982 | 3,715,426 | .. | .... | .. | .... | 982 | 3,715,426 | 221 | 1,660,434 | 56 | 240,845 | 277 | 1,901,279 |
| 21 | Shikárpur .. .. .. .. | 1,188 | 4,844,630 | 17 | 279,085 | 1,205 | 5,123,715 | 1,155 | 3,224,262 | .. | .... | 13 | 63,830 | 1,168 | 3,288,092 | 33 | 1,620,368 | 4 | 215,255 | 37 | 1,835,623 |
| 22 | Upper Sind Frontier .. .. | .. | 1,563,022 | .. | 35,204 | .. | 1,598,226 | .. | 660,690 | .. | .... | .. | 27,333 | .. | 688,023 | .. | 902,332 | .. | 7,871 | .. | 910,203 |
| 23 | Thar and Párkar .. .. .. | 70 | 8,146,560 | .. | .. | 70 | 8,146,560 | .. | .... | .. | .... | .. | .... | .. | .... | 70 | 8,146,560 | .. | .... | 70 | 8,146,560 |
| | Total B. ... | 3,168 | 24,332,498 | 88 | 599,800 | 3,256 | 24,932,298 | 2,484 | 9,314,810 | ... | ... | 13 | 91,163 | 2,497 | 9,405,973 | 684 | 15,017,688 | 75 | 508,637 | 759 | 15,526,325 |
| | Grand Total ... | 23,997¾ | 67,889,474 | 2,213¼ | 4,520,304 | 26,211 | 72,409,778 | 20,118¼ | 46,971,677 | 2,223 | 4,219,862 | 1,257¼ | 2,981,898 | 23,598½ | 54,173,437 | 1,656½ | 16,697,935 | 956 | 1,538,406 | 2,612½ | 18,236,341 |

| No. | District. | | Total Area as in Columns 5, 6 and 7 of Return No. I. | Cultivated Area. Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. | Add Current Fallows. | Total Columns 5 and 6. | Detail of Column 7. Assessed Land. | Unassessed Land. | Uncultivated Area. Available for Cultivation. Assessed Land. | Unassessed Land. | Not available for Cultivation. Forest. | Other. | Total Columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | A.—Bombay Presidency Proper. | | Acres. | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. .. .. | 1,057,012 | 714,450 | 17,982 | 696,468 | 81,455 | 777,923 | 776,050 | 1,873 | 82,947 | 12,359 | .... | 189,783 | 279,089 |
| | | Other Government.. .. .. | 1,262,151 | 662,206 | 2,027 | 660,179 | 327,446 | 987,625 | 987,563 | 62 | .... | 6,450 | .... | 268,076 | 274,526 |
| | | Alienated .. .. .. .. | 104,821 | 53,856 | 384 | 53,472 | 51,147 | 104,619 | 104,619 | .... | .... | .... | .... | 202 | 202 |
| | | Total ... | 2,423,984 | 1,430,512 | 20,393 | 1,410,119 | 460,048 | 1,870,167 | 1,868,232 | 1,935 | 82,947 | 18,809 | ... | 452,061 | 553,817 |
| 2 | Kaira ... ... | Rayatwári .. .. .. .. | 757,834 | 590,509 | 40,033 | 550,476 | 31,089 | 581,565 | 581,149 | 416 | 75,536 | 936 | .... | 99,797 | 176,269 |
| | | Other Government.. .. .. | 174,648 | 159,451 | 5,927 | 153,524 | 5,084 | 158,608 | 158,578 | 30 | 342 | .... | .... | 15,698 | 16,040 |
| | | Alienated .. .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 932,482 | 749,960 | 45,960 | 704,000 | 36,173 | 740,173 | 739,727 | 446 | 75,878 | 936 | ... | 115,495 | 192,309 |
| 3 | Panch Maháls ... | Rayatwári .. .. .. .. | 666,659 | 287,254 | 52,436 | 234,818 | 34,888 | 269,706 | 268,670 | 1,036 | 104,594 | 193,865 | 47,801 | 50,693 | 396,953 |
| | | Other Government.. .. .. | 99,376 | 27,625 | 2,350 | 25,275 | 59,130 | 84,405 | 84,405 | .... | .... | .... | .... | 14,971 | 14,971 |
| | | Alienated .. .. .. .. | 27,639 | 14,775 | 224 | 14,551 | 10,284 | 24,835 | 24,835 | .... | .... | .... | 776 | 2,028 | 2,804 |
| | | Total ... | 793,674 | 329,654 | 55,010 | 274,644 | 104,302 | 378,946 | 377,910 | 1,036 | 104,594 | 193,865 | 48,577 | 67,692 | 414,728 |
| 4 | Broach ... ... | Rayatwári .. .. .. .. | 916,504 | 567,514 | 3,724 | 563,790 | 77,279 | 641,069 | 635,768 | 5,301 | 28,661 | 3,446 | 8 | 243,320 | 275,435 |
| | | Other Government.. .. .. | 1,179 | 993 | .... | 993 | 149 | 1,142 | 1,142 | .... | .... | .... | .... | 37 | 37 |
| | | Alienated .. .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 917,683 | 568,507 | 3,724 | 564,783 | 77,428 | 642,211 | 636,910 | 5,301 | 28,661 | 3,446 | 8 | 243,357 | 275,472 |
| 5 | Surat ... ... | Rayatwári .. .. .. .. | 1,014,996 | 539,451 | 71,279 | 468,172 | 256,794 | 724,966 | 724,081 | 885 | 35,152 | 30,430 | 45,611 | 178,837 | 290,030 |
| | | Other Government.. .. .. | 12,235 | 6,070 | 623 | 5,447 | 4,908 | 10,355 | 10,355 | .... | .... | 759 | .... | 1,121 | 1,880 |
| | | Alienated .. .. .. .. | 5,254 | 3,918 | 70 | 3,848 | 1,258 | 5,106 | 5,106 | .... | .... | .... | .... | 148 | 148 |
| | | Total ... | 1,032,485 | 549,439 | 71,972 | 477,467 | 262,960 | 740,427 | 739,542 | 885 | 35,152 | 31,189 | 45,611 | 180,106 | 292,058 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. ... | Rayatwári .. .. .. .. | 4,614,218 | 2,767,620 | 12,943 | 2,754,677 | 238,549 | 2,993,226 | 2,987,973 | 5,253 | 483,228 | 269,055 | 273,275 | 595,434 | 1,620,992 |
| | | Other Government.. .. .. | 279,440 | 48,652 | .... | 48,652 | 2,380 | 51,032 | 409 | 50,623 | .... | 145,176 | 77,552 | 5,680 | 228,408 |
| | | Alienated .. .. .. .. | 103,372 | 67,256 | 260 | 66,996 | 10,799 | 77,795 | 77,738 | 57 | 9,387 | 4,464 | 209 | 11,517 | 25,577 |
| | | Total ... | 4,997,030 | 2,883,528 | 13,203 | 2,870,325 | 251,728 | 3,122,053 | 3,066,120 | 55,933 | 492,615 | 418,695 | 351,036 | 612,631 | 1,874,977 |
| 7 | Násik ... ... | Rayatwári .. .. .. .. | 3,395,131 | 1,850,153 | 27,994 | 1,822,159 | 354,698 | 2,176,857 | 2,176,520 | 337 | 159,339 | 36,945 | 700,794 | 321,196 | 1,218,274 |
| | | Other Government.. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. .. | 167,698 | 103,674 | 1,440 | 102,234 | 19,425 | 121,659 | 121,502 | 157 | 13,405 | 8,876 | 2,299 | 21,459 | 46,039 |
| | | Total ... | 3,562,829 | 1,953,827 | 29,434 | 1,924,393 | 374,123 | 2,298,516 | 2,298,022 | 494 | 172,744 | 45,821 | 703,093 | 342,655 | 1,264,313 |
| 8 | Ahmadnagar ... | Rayatwári .. .. .. .. | 3,675,790 | 2,342,043 | 34,649 | 2,307,394 | 336,756 | 2,644,150 | 2,643,786 | 364 | 117,276 | 27,883 | 518,415 | 368,066 | 1,031,640 |
| | | Other Government.. .. .. | 232,128 | 154,818 | 1,054 | 153,764 | 29,388 | 183,152 | 183,151 | 1 | 6,684 | 4,005 | 242 | 38,045 | 48,976 |
| | | Alienated .. .. .. .. | 221,819 | 164,345 | 616 | 163,729 | 21,631 | 185,360 | 185,345 | 15 | 8,840 | 1,373 | .... | 26,246 | 36,459 |
| | | Total ... | 4,129,737 | 2,661,206 | 36,319 | 2,624,887 | 387,775 | 3,012,662 | 3,012,282 | 380 | 132,800 | 33,261 | 518,657 | 432,357 | 1,117,075 |
| 9 | Poona ... ... | Rayatwári .. .. .. .. | 2,867,126 | 1,831,502 | 61,001 | 1,770,501 | 277,782 | 2,048,283 | 2,047,487 | 796 | 51,114 | 14,372 | 358,587 | 394,770 | 818,843 |
| | | Other Government.. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. .. | 469,608 | 322,653 | 9,720 | 312,933 | 54,815 | 367,748 | 367,273 | 475 | 6,403 | 5,597 | 2,980 | 86,880 | 101,860 |
| | | Total ... | 3,336,734 | 2,154,155 | 70,721 | 2,083,434 | 332,597 | 2,416,031 | 2,414,760 | 1,271 | 57,517 | 19,969 | 361,567 | 481,650 | 920,703 |
| 10 | Sholápur... ... | Rayatwári .. .. .. .. | 2,697,959 | 1,982,666 | 24,927 | 1,957,739 | 302,008 | 2,259,747 | 2,259,509 | 238 | 64,164 | 11,805 | 146,416 | 215,827 | 438,212 |
| | | Other Government.. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. .. | 124,156 | 86,599 | 1,596 | 85,003 | 14,197 | 99,200 | 99,192 | 8 | 457 | 2,571 | .... | 21,928 | 24,956 |
| | | Total | 2,822,115 | 2,069,265 | 26,523 | 2,042,742 | 316,205 | 2,358,947 | 2,358,701 | 246 | 64,621 | 14,376 | 146,416 | 237,755 | 463,168 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Sátára ... | Rayatwári .. .. .. .. | 2,454,778 | 1,557,541 | 83,443 | 1,474,098 | 294,548 | 1,768,646 | 1,768,380 | 266 | 30,517 | 8,465 | 422,899 | 224,251 | 886,132 |
| | | Other Government .. .. | .... | .. | .. | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated .. .. .. .. | 494,497 | 326,409 | 20,729 | 305,680 | 101,330 | 407,010 | 407,010 | .... | 582 | 63 | 12,595 | 67,447 | 87,487 |
| | | | 2,949,275 | 1,883,950 | 104,172 | 1,779,778 | 395,878 | 2,175,656 | 2,175,390 | 266 | 31,099 | 15,328 | 435,494 | 291,698 | 773,619 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. .. .. | 2,276,064 | 1,430,663 | 33,795 | 1,396,868 | 235,266 | 1,632,134 | 1,631,535 | 599 | 90,809 | 27,090 | 383,266 | 142,765 | 643,930 |
| | | Other Government .. .. | .... | .. | .. | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated .. .. .. .. | 540,039 | 331,638 | 7,902 | 323,736 | 76,540 | 400,276 | 400,276 | .. | 43,940 | 26,345 | 27,760 | 41,718 | 139,763 |
| | | Total ... | 2,816,103 | 1,762,301 | 41,697 | 1,720,604 | 311,806 | 2,032,410 | 2,031,811 | 599 | 134,749 | 53,435 | 411,026 | 184,483 | 783,693 |
| 13 | Bijápur ... | Rayatwári .. .. .. .. | 3,205,699 | 2,337,807 | 3,129 | 2,334,678 | 266,018 | 2,600,696 | 2,600,557 | 139 | 253,708 | 22,436 | 162,477 | 166,382 | 605,003 |
| | | Other Government .. .. | .... | .. | .. | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated .. .. .. .. | 387,063 | 271,973 | 167 | 271,806 | 85,270 | 357,076 | 357,059 | 17 | 787 | 4,154 | .. | 25,046 | 29,987 |
| | | Total ... | 3,592,762 | 2,609,780 | 3,296 | 2,606,484 | 351,288 | 2,957,772 | 2,957,616 | 156 | 254,495 | 26,590 | 162,477 | 191,428 | 634,990 |
| 14 | Dhárwár ... | Rayatwári .. .. .. .. | 2,687,961 | 1,958,174 | 25,408 | 1,932,766 | 220,601 | 2,153,367 | 2,153,251 | 116 | 70,494 | 168 | 276,595 | 187,337 | 534,594 |
| | | Other Government .. .. | 1,165 | 332 | .. | 332 | 117 | 449 | 449 | .... | 647 | .. | .. | 69 | 716 |
| | | Alienated .. .. .. .. | 180,902 | 108,555 | 1,385 | 107,170 | 35,648 | 142,818 | 142,535 | 283 | 9,128 | 3,662 | .. | 25,294 | 38,084 |
| | | Total ... | 2,870,028 | 2,067,061 | 26,793 | 2,040,268 | 256,366 | 2,296,634 | 2,296,235 | 399 | 80,269 | 3,830 | 276,595 | 212,700 | 573,394 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. .. .. | 2,379,085 | 521,226 | 7,395 | 513,831 | 463,552 | 977,383 | 968,813 | 8,570 | 49,024 | 130,318 | 360,976 | 861,334 | 1,401,652 |
| | | Other Government .. ... | 3,847 | 1,072 | 7 | 1,065 | 1,054 | 2,119 | 2,119 | .... | .. | 1,195 | .. | 533 | 1,728 |
| | | Alienated .. .. .. .. | 31,821 | 8,146 | 40 | 8,106 | 9,861 | 17,967 | 17,967 | .... | 1 | 6,121 | 1,303 | 6,429 | 13,854 |
| | | Total ... | 2,414,703 | 530,444 | 7,442 | 523,002 | 474,467 | 997,469 | 988,899 | 8,570 | 49,025 | 137,634 | 362,279 | 868,296 | 1,417,234 |
| 16 | Kolába ... | Rayatwári ... .. .. .. | 570,718 | 180,311 | 4,896 | 175,415 | 111,616 | 287,031 | 285,832 | 1,199 | 7,972 | 64,711 | 63,690 | 147,314 | 283,687 |
| | | Other Government .. .. | 529,573 | 191,163 | 4,874 | 186,289 | 112,154 | 298,443 | 298,443 | .... | 2,150 | 6,108 | 78,115 | 144,757 | 231,130 |
| | | Alienated ... .. .. .. | 3,466 | 1,071 | 6 | 1,065 | 1,283 | 2,348 | 2,348 | .... | .. | 608 | .. | 510 | 1,118 |
| | | Total ... | 1,103,757 | 372,545 | 9,776 | 362,769 | 225,053 | 587,822 | 586,623 | 1,199 | 10,122 | 71,427 | 141,805 | 292,581 | 515,935 |
| 17 | Ratnágiri ... | Rayatwári .. .. .. .. | 122,427 | 40,118 | 1,102 | 39,016 | 34,065 | 73,081 | 73,081 | .... | 480 | 1,633 | 5,270 | 41,963 | 49,346 |
| | | Other Government .. .. | 1,624,120 | 557,068 | 45,843 | 511,225 | 627,247 | 1,138,472 | 1,138,472 | .... | 628 | 7,265 | 19,874 | 457,881 | 485,048 |
| | | Alienated .. .. .. .. | 28,580 | 16,267 | 1,125 | 15,142 | 4,970 | 20,112 | 20,112 | .... | 6 | 206 | .. | 8,256 | 8,468 |
| | | Total ... | 1,775,127 | 613,453 | 48,070 | 565,383 | 666,282 | 1,231,665 | 1,231,665 | ..... | 1,114 | 9,104 | 25,144 | 508,100 | 543,462 |
| 18 | Kánara ... | Rayatwári .. .. .. .. | 2,296,956 | 224,387 | 11,017 | 213,370 | 82,707 | 296,077 | 295,921 | 156 | 52,913 | 730,720 | 743,151 | 474,095 | 2,000,879 |
| | | Other Government .. .. | .... | .. | .. | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Alienated ... .. .. .. | .... | .. | .. | .. | .... | .. | .. | .... | .. | .. | .. | .. | .. |
| | | Total ... | 2,296,956 | 224,387 | 11,017 | 213,370 | 82,707 | 296,077 | 295,921 | 156 | 52,913 | 730,720 | 743,151 | 474,095 | 2,000,879 |
| | Total A. ... | Rayatwári .. .. .. .. | 37,656,867 | 21,723,389 | 517,153 | 21,206,236 | 3,699,671 | 24,905,907 | 24,878,363 | 27,544 | 1,757,928 | 1,586,637 | 4,509,231 | 4,897,164 | 12,750,960 |
| | | Other Government .. .. | 4,219,862 | 1,8 9,450 | 62,705 | 1,746,745 | 1,169,957 | 2,915,802 | 2,865,086 | 50,716 | 10,451 | 170,958 | 175,783 | 946,868 | 1,304,060 |
| | | Alienated .. .. .. .. | 2,890,735 | 1,881,135 | 45,664 | 1,835,471 | 498,458 | 2,333,929 | 2,332,917 | 1,012 | 92,936 | 70,340 | 47,922 | 345,108 | 556,806 |
| | | Total ... | 44,767,464 | 25,413,974 | 625,522 | 24,788,452 | 5,367,186 | 30,155,638 | 30,076,366 | 79,272 | 1,861,315 | 1,828,435 | 4,732,936 | 6,189,140 | 14,611,826 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 1,714,432 | 246,470 | 15,527 | 230,943 | 240,618 | 471,561 | ... | ..... | 262,973 | | 72,726 | 907,172 | 1,242,871 |
| 20 | Hyderabad ... ... ... ... ... | | 3,715,426 | 571,028 | 5,732 | 565,296 | 916,873 | 1,482,169 | ... | ..... | 1,577,208 | | 5,150 | 650,899 | 2,233,257 |
| 21 | Shikárpur ... ... ... ... ... | | 3,288,092 | 727,305 | 94,124 | 633,181 | 606,851 | 1,240,032 | ... | ..... | 1,106,135 | | 238,692 | 703,233 | 2,048,060 |
| 22 | Upper Sind Frontier... ... ... ... | | 688,023 | 145,781 | 7,733 | 138,048 | 238,233 | 376,281 | ... | ..... | 208,740 | | 32,862 | 70,140 | 311,742 |
| 23 | Thar and Párkar ... ... ... ... | | Not | available. | | | | | | | | | | | |
| | | Total B. ... | 9,405,973 | 1,690,584 | 123,116 | 1,567,468 | 2,002,575 | 3,570,043 | ... | ..... | 3,155,056 | | 349,430 | 2,331,444 | 5,835,930 |
| | | Grand Total ... | 54,173,437 | 27,104,558 | 748,638 | 26,355,920 | 7,369,761 | 33,725,681 | ... | ..... | 6,844,806 | | 5,082,366 | 8,520,584 | 20,447,756 |

# III.—Crops, 1886-87.

| No. | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet), Sorghum vulgare, &c. | Bájri (Spiked Millet), Penicillaria spicata. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu), Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Maka), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Eleusine corocana. | Rále, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum miliaceum, P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum pilosum. | Amaranth (Rájgira), Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 154,662 | 122,454 | 65,103 | 88,037 | 12,614 | 2,557 | 13,207 | 3,317 | 120 | 6,168 | 3,497 | ..... | 19 | ..... | 471,755 |
| | | Other Government ... ... | 121,127 | 82,342 | 17,962 | 139,796 | 4,222 | 775 | 4,982 | 450 | 83 | 3,558 | 7,059 | ..... | ..... | ..... | 382,356 |
| | | Alienated ... ... ... | 10,491 | 5,892 | 3,597 | 11,333 | 162 | 240 | 247 | 4 | 25 | 491 | 330 | ..... | ..... | ..... | 32,812 |
| | | Total ... | 286,280 | 210,688 | 86,662 | 239,166 | 16,998 | 3,572 | 18,436 | 3,771 | 228 | 10,217 | 10,886 | ... | 19 | ... | 886,923 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 56,876 | 130,313 | 114,291 | 26,034 | 7,701 | 361 | 81,851 | 56,231 | 203 | 628 | 1,045 | ..... | 174 | ..... | 475,708 |
| | | Other Government ... ... | 15,059 | 38,467 | 15,110 | 1,069 | 250 | 17 | 35,084 | 11,559 | 38 | 518 | 27 | ..... | 27 | ..... | 117,225 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 71,935 | 168,780 | 129,401 | 27,103 | 7,951 | 378 | 116,935 | 67,790 | 241 | 1,146 | 1,072 | ... | 201 | ... | 592,933 |
| 3 | Panch Maháls ... | Rayatwári ... ... ... | 1,814 | 33,372 | 38,838 | 10,658 | 661 | 64,187 | 17,326 | 12,680 | 12 | 1,917 | 10,168 | 72 | 29 | 750 | 192,484 |
| | | Other Government ... ... | 592 | 3,640 | 7,201 | 1,187 | 90 | 3,829 | 2,847 | 1,086 | ..... | 131 | 538 | ..... | 8 | ..... | 21,149 |
| | | Alienated ... ... ... | 201 | 4,978 | 3,587 | 79 | ..... | 348 | 1,249 | 883 | ..... | ..... | 1,105 | ..... | ..... | ..... | 12,430 |
| | | Total ... | 2,607 | 41,990 | 49,626 | 11,924 | 751 | 68,364 | 21,422 | 14,649 | 12 | 2,048 | 11,811 | 72 | 37 | 750 | 226,063 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 118,499 | 10,134 | 22,116 | 92,700 | ..... | 12 | 9,125 | 277 | 1 | 31 | 3 | ..... | 5 | ..... | 252,903 |
| | | Other Government ... ... | 274 | ..... | ..... | 120 | ..... | ..... | 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 399 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 118,773 | 10,134 | 22,116 | 92,820 | ... | 12 | 9,130 | 277 | 1 | 31 | 3 | ... | 5 | ... | 253,302 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 98,891 | 6,814 | 101,866 | 29,671 | 21 | 45 | 34,622 | 11,922 | ..... | 108 | 972 | 110 | 2 | 798 | 285,842 |
| | | Other Government ... ... | 1,839 | 10 | 967 | 91 | ..... | ..... | 489 | 88 | ..... | ..... | ..... | ..... | ..... | ..... | 3,484 |
| | | Alienated ... ... ... | 2,855 | 59 | 215 | 76 | ..... | ..... | 125 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | 3,375 |
| | | Total ... | 103,585 | 6,883 | 103,048 | 29,838 | 21 | 45 | 35,236 | 12,055 | ... | 108 | 972 | 110 | 2 | 798 | 292,701 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 498,063 | 544,509 | 12,934 | 296,349 | 11 | 1,661 | 3,221 | 8,401 | 68 | 3,861 | 1,149 | 617 | 389 | ..... | 1,371,233 |
| | | Other Government ... ... | 2,233 | 4,803 | 5,872 | 11,426 | ..... | 7 | 1,904 | 1,939 | ..... | 560 | 1,343 | 360 | 4 | ..... | 30,451 |
| | | Alienated ... ... ... | 15,185 | 11,079 | 536 | 5,359 | ..... | 72 | 27 | 154 | 1 | 219 | 5 | 5 | 45 | ..... | 32,687 |
| | | Total ... | 515,481 | 560,391 | 19,342 | 313,134 | 11 | 1,740 | 5,152 | 10,494 | 69 | 4,640 | 2,497 | 982 | 438 | ... | 1,434,371 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 90,060 | 686,463 | 45,599 | 250,870 | ..... | 1,685 | 6 | 156,260 | 242 | 51,513 | 1 | 1,544 | 179 | 1 | 1,284,423 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 5,211 | 30,850 | 2,464 | 29,468 | ..... | 94 | ..... | 5,903 | 1 | 1,904 | ..... | 47 | ..... | ..... | 75,942 |
| | | Total ... | 95,271 | 717,313 | 48,063 | 280,338 | ... | 1,779 | 6 | 162,163 | 243 | 53,417 | 1 | 1,591 | 179 | 1 | 1,360,365 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 665,883 | 962,544 | 9,304 | 193,837 | 383 | 360 | 123 | 25,555 | 1,290 | 12,553 | 1 | 2,734 | 460 | 1,292 | 1,876,269 |
| | | Other Government ... ... | 56,383 | 50,455 | 221 | 10,553 | 151 | 3 | 3 | ..... | 161 | 42 | ..... | 6 | 11 | ..... | 118,289 |
| | | Alienated ... ... ... | 63,674 | 53,625 | 62 | 12,796 | 8 | 32 | ..... | ..... | 33 | 1 | ..... | 1 | 14 | ..... | 130,246 |
| | | [illegible] | [illegible]890 | 1,066,624 | 9,587 | 217,486 | 542 | 395 | 126 | 25,555 | 1,484 | 12,596 | 1 | 2,741 | 485 | 1,292 | 2,124,804 |
| | | [illegible] | [illegible] 319 | 616,655 | 47,735 | 88,257 | 756 | 2,395 | 55 | 60,918 | 1,384 | 34,395 | 7 | 5,741 | 192 | 1,066 | 1,481,875 |
| 9 | Poona ... ... | Rayatwári ... ... ... | [illegible] | [illegible] | [illegible] | [illegible] | 88 | 110 | ..... | 4,688 | 103 | 2,013 | ..... | 699 | 11 | 166 | ..... |
| | | Other Government ... ... | ..... | 140,838 | [illegible] | 18,153 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 267,564 |
| | | Alienated ... ... ... | 92,082 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| | | Total ... | 714,401 | 757,493 | 56,348 | 106,410 | 844 | 2,505 | 55 | 65,606 | 1,487 | 36,408 | 7 | 6,440 | 203 | 1,232 | 1,749,439 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... ... | 1,023,602 | 331,541 | 20,107 | 55,324 | 924 | 11,454 | 2 | 16 | 862 | 794 | ..... | 179 | 21 | 8,164 | 1,452,990 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 41,643 | 20,617 | 703 | 2,844 | 31 | 639 | ..... | ..... | 61 | 127 | ..... | ..... | 7 | 412 | 67,084 |
| | | Total ... | 1,065,245 | 352,158 | 20,810 | 58,168 | 955 | 12,093 | 2 | 16 | 923 | 921 | ..... | 179 | 28 | 8,576 | 1,520,074 |
| 11 | Sátára ... ... | Rayatwári ... ... ... | 429,099 | 502,325 | 30,251 | 57,857 | 4,116 | 7,283 | 66 | 53,451 | 19,014 | 42,902 | ..... | 559 | 482 | 76 | 1,147,481 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 95,990 | 77,249 | 11,778 | 12,695 | 889 | 1,938 | 15 | 16,979 | 7,371 | 14,079 | ..... | 193 | 262 | ..... | 239,438 |
| | | Total ... | 525,089 | 579,574 | 42,029 | 70,552 | 5,005 | 9,221 | 81 | 70,430 | 26,385 | 56,981 | ..... | 752 | 744 | 76 | 1,386,919 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 545,147 | 120,010 | 100,697 | 86,268 | 266 | 4,852 | 457 | 44,412 | 68,083 | 24,551 | ..... | ..... | 3 | ..... | 994,746 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 142,115 | 42,241 | 8,054 | 14,401 | 84 | 1,072 | 383 | 6,708 | 12,209 | 4,313 | ..... | ..... | ..... | ..... | 231,580 |
| | | Total ... | 687,262 | 162,251 | 108,751 | 100,669 | 350 | 5,924 | 840 | 51,120 | 80,292 | 28,864 | ..... | ..... | 3 | ..... | 1,226,326 |
| 13 | Bijápur... ... | Rayatwári ... ... ... | 1,091,648 | 237,993 | 9,358 | 160,735 | 12 | 497 | 30 | 56 | 21,635 | 6,686 | ..... | ..... | 2 | ..... | 1,528,652 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 125,834 | 26,441 | 488 | 16,402 | 1 | 149 | ..... | 19 | 4,294 | 716 | ..... | ..... | ..... | ..... | 174,344 |
| | | Total ... | 1,217,482 | 264,434 | 9,846 | 177,137 | 13 | 646 | 30 | 75 | 25,929 | 7,402 | ..... | ..... | 2 | ..... | 1,702,996 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 606,283 | 5,808 | 131,096 | 224,136 | 41 | 45 | 79 | 43,038 | 86,481 | 30,153 | ..... | ..... | ..... | ..... | 1,127,160 |
| | | Other Government ... ... | 171 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 55 | 8 | ..... | ..... | ..... | ..... | 234 |
| | | Alienated ... ... ... | 35,982 | 388 | 17,304 | 8,020 | ..... | 2 | ..... | 4,510 | 5,631 | 2,175 | ..... | ..... | ..... | ..... | 74,012 |
| | | Total ... | 642,436 | 6,196 | 148,400 | 232,156 | 41 | 47 | 79 | 47,548 | 92,167 | 32,336 | ..... | ..... | ..... | ..... | 1,201,406 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári ... ... ... | 91 | ..... | 321,237 | 157 | ..... | 60 | 15,982 | 73,320 | ..... | 31,872 | ..... | ..... | ..... | ..... | 442,719 |
| | | Other Government ... ... | ..... | ..... | 935 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 935 |
| | | Alienated ... ... ... | ..... | ..... | 7,227 | ..... | ..... | ..... | ..... | 321 | ..... | 143 | ..... | ..... | ..... | ..... | 7,691 |
| | | Total ... | 91 | ..... | 329,399 | 157 | ..... | 60 | 15,982 | 73,641 | ..... | 32,015 | ..... | ..... | ..... | ..... | 451,345 |
| 16 | Kolába ... ... | Rayatwári ... ... ... | ..... | ..... | 138,934 | 11 | ..... | ..... | 3,018 | 14,433 | 2 | 10,757 | ..... | ..... | ..... | ..... | 167,155 |
| | | Other Government ... ... | ..... | ..... | 59,453 | ..... | ..... | ..... | 23,978 | 47,250 | ..... | 39,519 | ..... | ..... | ..... | ..... | 170,200 |
| | | Alienated ... ... ... | ..... | ..... | 861 | ..... | ..... | ..... | ..... | 76 | ..... | 85 | ..... | ..... | ..... | ..... | 1,022 |
| | | Total ... | ..... | ..... | 199,248 | 11 | ..... | ..... | 26,996 | 61,759 | 2 | 50,361 | ..... | ..... | ..... | ..... | 338,377 |
| 17 | Ratnágiri ... | Rayatwári ... ... ... | Not received. | | | | | | | | | | | | | | |
| | | Other Government ... ... | | | | | | | | | | | | | | | |
| | | Alienated ... ... ... | | | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | | | |
| 18 | Kánara... ... | Rayatwári ... ... ... | 1,071 | ..... | 177,541 | ..... | ..... | 17 | ..... | 5,408 | 315 | 322 | ..... | ..... | ..... | ..... | 184,674 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 1,071 | ..... | 177,541 | ..... | ..... | 17 | ..... | 5,408 | 315 | 322 | ..... | ..... | ..... | ..... | 184,674 |
| | Total A. ... | Rayatwári ... ... ... | 6,003,958 | 4,310,935 | 1,387,007 | 1,660,901 | 27,506 | 97,471 | 179,170 | 569,695 | 199,712 | 259,211 | 16,843 | 11,556 | 1,957 | 12,147 | 14,738,069 |
| | | Other Government ... ... | 197,678 | 179,717 | 107,721 | 164,542 | 4,713 | 4,631 | 69,292 | 62,372 | 337 | 44,336 | 8,967 | 366 | 50 | ..... | 844,722 |
| | | Alienated ... ... ... | 631,263 | 414,257 | 65,489 | 131,626 | 1,263 | 4,696 | 2,046 | 40,290 | 29,729 | 26,266 | 1,440 | 945 | 339 | 578 | 1,350,227 |
| | | Total ... | 6,832,899 | 4,904,909 | 1,560,217 | 1,957,069 | 33,482 | 106,798 | 250,508 | 672,357 | 229,778 | 329,813 | 27,250 | 12,867 | 2,346 | 12,725 | 16,933,018 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 44,617 | 11,562 | 91,084 | 36,380 | 4,544 | 94 | ..... | 304 | 14 | 6 | ..... | ..... | ..... | 5 | 188,610 |
| 20 | Hyderabad ... ... ... ... ... | | 93,259 | 197,686 | 89,691 | 28,401 | ..... | ..... | ..... | 28 | ..... | ..... | ..... | ..... | ..... | 1,362 | 410,427 |
| 21 | Shikárpur ... ... ... ... ... | | 186,456 | 8,447 | 263,946 | 119,794 | ..... | ..... | ..... | 240 | ..... | ..... | ..... | ..... | ..... | 2,892 | 581,775 |
| 22 | Upper Sind Frontier ... ... ... | | 70,399 | 2,717 | 11,342 | 9,134 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 351 | 93,943 |
| 23 | Thar and Párkar ... ... ... ... | | Not available. | | | | | | | | | | | | | | |
| | | Total B. ... | 394,731 | 220,412 | 456,063 | 193,709 | 4,544 | 94 | ..... | 572 | 14 | 6 | ..... | ..... | ..... | 4,610 | 1,274,755 |
| | | Grand Total ... | 7,227,630 | 5,125,321 | 2,016,280 | 2,150,778 | 38,026 | 106,892 | 250,508 | 672,929 | 229,792 | 329,819 | 27,250 | 12,867 | 2,346 | 17,335 | 18,207,773 |

# III.—Crops, 1886-87—*continued.*

| No. | District. | | II.—Pulses. | | | | | | | | | | | | | III.—Orchard and Garden Produce. | | | | | IV.—Drugs and Narcotics. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Turi (Pigeon Pea), Cajanus indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mung o. | Udid (Black Gram), Phaseolus radiatus. | Math (Kidney bean), Phaseolus aconitifolius | Val (Large-fruited Dolichos), Dolichos lablab. | Chavli (Small-fruited Dolichos), Dolichos catiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lákh Láng), Lathyrus sativus | Field Vetch (Guvár), Cyamopsis psoraloides | Others. | Total II. | A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | Tobacco (Tambákhu), Nicotiana tabacum. | Bháng Gánja (Indian Hemp), Cannabis sativa | Opium (Afu), Papaver somniferum. | Coffee (Káfi, Bund), Coffea Arabica. | Tea (Chaha), Thea sinensis. | Cinchona, Cinchona officinalis. | Others. | To a IV. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | |
| | *1.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 2,855 | 7,043 | 7,421 | 2,057 | 31,001 | 175 | 293 | 118 | ... | ... | ... | 3,124 | ... | 54,087 | 672 | 1,240 | 2,875 | 1,402 | 6,189 | 1,854 | ... | ... | ... | ... | ... | ... | 1,854 |
| | | Other Government... | 911 | 12,383 | 13,066 | 2,715 | 16,001 | 30 | 1,254 | 8,135 | ... | ... | ... | 2,702 | ... | 57,247 | 351 | 377 | 4,430 | 101 | 5,259 | 427 | ... | ... | ... | ... | ... | ... | 427 |
| | | Alienated ... | 90 | 854 | 554 | 228 | 1,209 | ... | 8 | 580 | ... | ... | ... | 106 | ... | 3,629 | 5 | 20 | ... | 1 | 26 | 7 | ... | ... | ... | ... | ... | ... | 7 |
| | | Total ... | 3,856 | 20,280 | 21,041 | 5,000 | 48,211 | 205 | 1,555 | 8,883 | ... | ... | ... | 5,932 | ... | 114,963 | 1,028 | 1,637 | 7,305 | 1,504 | 11,474 | 2,288 | ... | ... | .. | ... | ... | ... | 2,288 |
| 2 | Kaira ... ... | Rayatwári ... | 20,340 | 17,58- | 3,69 | 530 | 27,989 | 1,074 | 3,821 | ... | ... | ... | ... | 4,859 | ... | 79,892 | 614 | 649 | 4,124 | 176 | 5,563 | 9,034 | ... | ... | ... | ... | ... | ... | 9,034 |
| | | Other Government... | 8,946 | 1,477 | 410 | 269 | 5,418 | 260 | 303 | ... | ... | ... | ... | 2,419 | ... | 19,502 | 283 | 240 | 1,615 | 73 | 2,211 | 11,775 | ... | ... | ... | ... | ... | ... | 11,775 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 29,286 | 19,065 | 4,101 | 799 | 33,407 | 1,334 | 4,124 | ... | ... | ... | ... | 7,278 | ... | 99,394 | 897 | 889 | 5,739 | 249 | 7,774 | 20,809 | ... | ... | ... | ... | ... | ... | 20,809 |
| 3 | Panch Máhals ... | Rayatwári ... | 3,200 | 41,427 | 2,731 | 4,470 | 2,611 | 35 | 199 | 15 | 959 | ... | ... | 783 | ... | 56,430 | 109 | 121 | 734 | 22 | 986 | 530 | ... | ... | ... | ... | ... | ... | 530 |
| | | Other Government... | 536 | 1,933 | 182 | 542 | 384 | 40 | 128 | ... | 172 | ... | ... | 61 | ... | 3,978 | 37 | 9 | ... | 2 | 48 | 133 | ... | ... | ... | ... | ... | ... | 133 |
| | | Alienated ... | 510 | 94 | 291 | 27 | 774 | 1 | 102 | ... | ... | ... | ... | 102 | ... | 1,901 | 1 | 3 | 15 | ... | 19 | 22 | ... | ... | ... | ... | ... | ... | 22 |
| | | Total ... | 4,246 | 43,454 | 3,204 | 5,039 | 3,769 | 76 | 429 | 15 | 1,131 | ... | ... | 946 | ... | 62,309 | 147 | 133 | 749 | 24 | 1,053 | 685 | ... | ... | ... | ... | ... | ... | 685 |
| 4 | Broach ... ... | Rayatwári ... | 14,550 | 2,551 | 888 | 17 | 2,900 | 1,118 | 247 | ... | 1,919 | ... | 47,753 | 348 | ... | 72,291 | 338 | 1,308 | 9,800 | 622 | 12,068 | 3,090 | ... | ... | ... | ... | ... | ... | 3,090 |
| | | Other Government... | 15 | ... | .. | ... | ... | ... | ... | ... | ... | ... | 270 | ... | ... | 28 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 14,565 | 2,551 | 888 | 17 | 2,900 | 1,118 | 247 | ... | 1,919 | ... | 48,023 | 348 | ... | 72,576 | 338 | 1,308 | 9,800 | 622 | 12,068 | 3,090 | ... | ... | ... | ... | ... | ... | 3,090 |
| 5 | Surat ... ... | Rayatwári ... | 24,151 | 2,654 | 3,532 | 2,369 | 503 | 51,719 | 724 | ... | 3,503 | 10 | 4,448 | 1,835 | ... | 95,448 | 385 | 2,099 | 208 | 829 | 3,521 | 801 | 7 | ... | ... | ... | ... | ... | 808 |
| | | Other Government... | 280 | 7 | 3 | ... | ... | 432 | 3 | ... | 10 | ... | 19 | 10 | ... | 792 | 1 | 6 | ... | 1 | 8 | 6 | ... | ... | ... | ... | ... | ... | 6 |
| | | Alienated ... | 27 | ... | 8 | 12 | 1 | 57 | 5 | ... | 1 | ... | 6 | 9 | ... | 1.6 | 7 | 24 | ... | 1 | 32 | 5 | ... | ... | ... | ... | ... | ... | 5 |
| | | Total ... | 24,458 | 2,661 | 3,571 | 2,381 | 504 | 52,208 | 732 | ... | 3,514 | 10 | 4,473 | 1,854 | ... | 96,366 | 393 | 2,129 | 208 | 831 | 3,561 | 812 | 7 | ... | .. | ... | ... | ... | 819 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 50,990 | 50,290 | 3,521 | 11,793 | 4,362 | 189 | 516 | 52,966 | 2,022 | 590 | 192 | ... | 10 | 177,371 | 1,334 | 3,041 | 10 | 3,274 | 7,659 | 8,192 | 44 | ... | ... | 12 | .. | ... | 8,248 |
| | | Other Government... | 1,778 | 3,371 | 13 | 250 | ... | ... | 1 | 239 | 25 | 101 | ... | ... | ... | 5.778 | 3 | 15 | ... | 10 | 28 | 38 | ... | ... | ... | ... | ... | ... | 38 |
| | | Alienated ... | 1,162 | 1,327 | 27 | 170 | 69 | 2 | 3 | 217 | 12 | 11 | ... | ... | ... | 3,000 | 141 | 155 | ... | 282 | 578 | 134 | ... | ... | ... | ... | ... | ... | 134 |
| | | Total ... | 53,930 | 54,988 | 3,561 | 12,143 | 4,431 | 191 | 520 | 53,422 | 2,059 | 702 | 192 | ... | 10 | 186,149 | 1,478 | 3,211 | 10 | 3,566 | 8,265 | 8,364 | 44 | ... | ... | 12 | ... | ... | 8,420 |
| 7 | Násik ... ... | Rayatwári ... | 21,255 | 75,641 | 3,445 | 27,331 | 4,126 | 27 | 64 | 77,536 | 2,260 | 9,911 | 3,729 | ... | ... | 225,325 | 2,740 | 3,037 | 469 | 1,955 | 8,201 | 1,749 | 15 | ... | ... | ... | ... | ... | 1,764 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,216 | 5,573 | 378 | 717 | 14 | 3 | ... | 2,318 | 349 | 899 | 544 | ... | ... | 12,011 | 751 | 362 | 11 | 151 | 1,275 | 118 | ... | ... | ... | ... | ... | ... | 118 |
| | | Total ... | 22,471 | 81,214 | 3,823 | 28,048 | 4,140 | 30 | 64 | 79,854 | 2,609 | 10,810 | 4,273 | ... | ... | 237,336 | 3,491 | 3,399 | 480 | 2,106 | 9,476 | 1,867 | 15 | .. | .. | ... | ... | ... | 1,882 |
| 8 | Ahmadnagar ... | Rayatwári ... | 53,960 | 97,168 | 13,664 | 4,700 | 25,265 | 1,333 | 122 | 54,325 | 1,32[illegible] | 505 | 62 | ... | 6 | 252,430 | 1,298 | 770 | 896 | 1,230 | 4,194 | 4,868 | 603 | ... | ... | ... | ... | ... | 5,471 |
| | | Other Government... | 3,864 | 7,680 | 589 | 220 | 2,062 | ... | ... | 5,829 | 42 | 167 | 107 | ... | ... | 20,560 | 36 | 26 | 7 | 59 | 128 | 200 | 1 | ... | ... | ... | ... | ... | 201 |
| | | Alienated ... | 4,025 | 8,450 | 73 | ... | 2,058 | ... | ... | 3,630 | ... | ... | ... | ... | ... | 18,236 | 95 | 47 | 26 | 60 | 228 | 239 | 185 | ... | ... | ... | ... | ... | 42 |
| | | Total | 61,849 | 113,298 | 14,326 | 4,920 | 29,385 | 1,333 | 122 | 63,784 | 1,362 | 672 | 169 | ... | 6 | 291,226 | 1,429 | 843 | 929 | 1,349 | 4,550 | 5,307 | 789 | ... | ... | ... | ... | ... | 6,096 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 3,304 | 41 | 32,537 | 1,621 | 1,850 | ... | ... | 13 | 161,525 | 9,585 | 1,192 | 826 | 2,678 | 14,281 | 1,628 | 35 | ... | ... | ... | ... | ... | 1,663 |
| | | Rayatwári ... | 26,347 | 59,101 | 2,957 | 4,173 | 29,581 | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government... | ... | ... | ... | ... | ... | 228 | 5 | 5,378 | 264 | 200 | ... | ... | ... | 27,309 | 2,225 | 408 | 207 | 671 | 3,511 | 103 | 6 | ... | ... | ... | ... | ... | 109 |
| 9 | Poona ... ... | Alienated ... | 6,285 | 10,622 | 168 | 924 | 3,237 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 32,632 | 69,723 | 3,125 | 5,097 | 32,818 | 3,530 | 46 | 37,915 | 1,885 | 2,050 | ... | ... | 13 | 188,834 | 11,810 | 1,600 | 1,033 | 3,349 | 17,792 | 1,731 | 41 | ... | ... | ... | ... | ... | 1,772 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. | 87,348 | 65,578 | 4,602 | 260 | 48,208 | 70 | 4 | 20,956 | 78 | 88 | 419 | .. | .. | 227,611 | 2,346 | 1,253 | 230 | 1,111 | 4,940 | 2,659 | 34 | .. | .. | .. | .. | .. | 2,693 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 2,642 | 2,851 | 97 | 17 | 2,663 | 2 | .. | 1,828 | .. | .. | .. | .. | .. | 10,100 | 180 | 27 | 61 | 18 | 286 | 99 | .. | .. | .. | .. | .. | .. | 99 |
| | | Total ... | 89,990 | 68,429 | 4,699 | 277 | 50,871 | 72 | 4 | 22,784 | 78 | 88 | 419 | ... | ... | 237,711 | 2,526 | 1,280 | 291 | 1,129 | 5,226 | 2,758 | 34 | ... | ... | ... | ... | ... | 2,792 |
| 11 | Sátára ... | Rayatwári .. .. | 52,189 | 66,388 | 12,734 | 22,524 | 66,639 | 3,241 | 280 | 42,833 | 1,612 | 441 | .. | .. | 358 | 269,239 | 4,897 | 879 | 822 | 1,021 | 7,619 | 8,578 | 527 | .. | 2 | .. | .. | .. | 9,107 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 11,578 | 14,690 | 2,501 | 5,725 | 8,438 | 731 | 65 | 9,318 | 620 | 102 | .. | .. | .. | 53,768 | 1,047 | 250 | 31 | 268 | 1,596 | 895 | 31 | .. | .. | .. | .. | .. | 926 |
| | | Total ... | 63,767 | 81,078 | 15,235 | 28,249 | 75,077 | 3,972 | 345 | 52,151 | 2,232 | 543 | ... | ... | 358 | 323,007 | 5,944 | 1,129 | 853 | 1,289 | 9,215 | 9,473 | 558 | ... | 2 | ... | ... | ... | 10,033 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. | 51,732 | 37,106 | 7,695 | 3,223 | 3,776 | 4,568 | 219 | 45,672 | 5,134 | 4,834 | .. | .. | .. | 163,959 | 3,301 | 1,838 | 201 | 2,116 | 7,456 | 19,356 | .. | .. | 63 | .. | .. | .. | 19,419 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 13,247 | 9,350 | 3,206 | 276 | 2,000 | 657 | 216 | 9,290 | 164 | 245 | .. | .. | .. | 38,651 | 906 | 317 | 224 | 427 | 1,874 | 4,850 | .. | .. | 24 | .. | .. | .. | 4,874 |
| | | Total ... | 64,979 | 46,456 | 10,901 | 3,499 | 5,776 | 5,225 | 435 | 54,962 | 5,298 | 5,079 | ... | ... | ... | 202,610 | 4,207 | 2,155 | 425 | 2,543 | 9,330 | 24,206 | ... | ... | 87 | ... | ... | ... | 24,293 |
| 13 | Bijápur ... | Rayatwári .. | 82,613 | 54,468 | 33,608 | .. | 5,890 | 3,924 | 3,367 | 25,524 | 29 | .. | .. | .. | .. | 209,423 | 1,502 | 1,184 | 53 | 2,125 | 4,864 | 1,879 | .. | .. | .. | .. | .. | .. | 1,879 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 9,494 | 4,664 | 3,931 | .. | 380 | 781 | 592 | 3,511 | 4 | .. | .. | .. | .. | 23,357 | 218 | 145 | 8 | 313 | 684 | 99 | .. | .. | .. | .. | .. | ... | 99 |
| | | Total ... | 92,107 | 59,132 | 37,539 | ... | 6,270 | 4,705 | 3,959 | 29,035 | 33 | ... | ... | ... | ... | 232,780 | 1,720 | 1,329 | 61 | 2,438 | 5,548 | 1,978 | ... | ... | ... | ... | ... | ... | 1,978 |
| 14 | Dhárwár ... | Rayatwári .. | 56,680 | 40,380 | 45,449 | 3,172 | 11,769 | 5,709 | 525 | 49,036 | 714 | 88 | .. | .. | .. | 213,522 | 1,675 | 3,287 | 12 | 4,621 | 9,595 | 2,658 | .. | .. | .. | .. | .. | .. | 2,658 |
| | | Other Government .. | 8 | .. | 10 | .. | 11 | .. | .. | 22 | .. | .. | .. | .. | .. | 51 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 3,678 | 2,223 | 2,605 | 86 | 508 | 369 | 53 | 3,559 | 121 | 1 | .. | .. | 1 | 13,204 | 90 | 335 | .. | 596 | 1,021 | 149 | .. | .. | .. | .. | .. | .. | 149 |
| | | Total ... | 60,366 | 42,603 | 48,064 | 3,258 | 12,288 | 6,078 | 578 | 52,617 | 835 | 89 | ... | ... | 1 | 226,777 | 1,765 | 3,622 | 12 | 5,217 | 10,616 | 2,807 | ... | ... | ... | .. | . | ... | 2,807 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. | 6,889 | 3,635 | 625 | 22,748 | .. | 5,011 | 3,509 | 850 | 264 | 3 | 112 | .. | .. | 43,646 | 811 | 746 | 7 | 3,224 | 4,788 | 1 | .. | .. | .. | ... | .. | .. | 1 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | 8 | .. | 129 | 137 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 64 | .. | .. | 56 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 120 | 15 | 25 | .. | 201 | 241 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 6,953 | 3,635 | 625 | 22,804 | . . | 5,011 | 3,509 | 850 | 264 | 3 | 112 | ... | ... | 43,766 | 826 | 779 | 7 | 3,554 | 5,166 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| 16 | Kolába ... | Rayatwári .. .. | 499 | 2,571 | 896 | 1,006 | .. | 3,778 | 42 | .. | .. | .. | .. | .. | .. | 8,792 | 155 | 176 | 1 | 1,912 | 2,244 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Other Government .. | 2,302 | 1,272 | 1,920 | 7,145 | .. | 2,634 | 18 | .. | .. | .. | .. | .. | .. | 15,291 | .. | 86 | .. | 2 | 88 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | .. | 43 | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | 49 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 2,801 | 3,886 | 2,816 | 8,151 | ... | 6,418 | 60 | ... | ... | ... | ... | ... | ... | 24,132 | 155 | 262 | 1 | 1,914 | 2,332 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri ... | Rayatwári .. .. | Not received. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Other Government .. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Alienated .. .. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Total .. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Kánara ... | Rayatwári .. .. | 242 | 193 | 1,454 | 1,523 | .. | 146 | 4 | 2,334 | 338 | .. | .. | .. | 167 | 6,401 | 232 | 642 | 902 | 17,614 | 19,390 | .. | .. | .. | 48 | .. | .. | .. | 48 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | .. | .. | ... | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 242 | 193 | 1,454 | 1,523 | ... | 146 | 4 | 2,334 | 338 | ... | ... | ... | 167 | 6,401 | 232 | 642 | 902 | 17,614 | 19,390 | ... | ... | ... | 48 | ... | ... | ... | 48 |
| | Total A. ... | Rayatwári .. .. | 555,840 | 623,782 | 148,913 | 111,826 | 264,620 | 85,421 | 13,977 | 404,702 | 21,773 | 18,820 | 56,715 | 10,949 | 554 | 2317,392 | 31,994 | 23,462 | 22,170 | 45,93 | 123,558 | 66,877 | 1,265 | .. | 113 | 12 | ... | .. | 68,267 |
| | | Other Government .. | 18,640 | 28,123 | 16,221 | 11,141 | 23,876 | 3,396 | 1,707 | 14,275 | 249 | 268 | 396 | 5,192 | .. | 123,484 | 711 | 767 | 6,[illegible]52 | 377 | 7,[illegible]07 | 12,579 | 1 | .. | .. | .. | .. | .. | 12,580 |
| | | Alienated .. .. | 54,018 | 60,741 | 13,839 | 8,238 | 21,351 | 2,835 | 1,049 | 39,629 | 1,535 | 1,458 | 550 | 217 | 1 | 2[illegible]5,461 | 5,681 | 2,118 | 583 | 2,989 | 11,371 | 6,720 | 222 | .. | 24 | .. | .. | .. | 6,966 |
| | | Total ... | 628,498 | 712,646 | 178,973 | 131,205 | 309,847 | 91,652 | 16,733 | 458,606 | 23,557 | 20,046 | 57,661 | 16,358 | 555 | 2646,337 | 38,386 | 26,347 | 28,805 | 49,298 | 142,836 | 83,176 | 1,488 | ... | 137 | 12 | ... | ... | 87,813 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | ... | 1,658 | 5,624 | 2,156 | 8,041 | ... | ... | ... | ... | 20 | ... | ... | ... | 17,499 | ... | ... | ... | ... | 3,20[illegible] | 202 | 120 | ... | ... | ... | ... | ... | 322 |
| 20 | Hyderabad ... ... ... | | ... | 2,729 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 15,053 | 17,782 | ... | ... | ... | ... | 16,944 | 4,094 | ... | ... | ... | ... | ... | 12 | 4,106 |
| 21 | Shikárpur ... ... ... ... | | 2 | 14,751 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 58,933 | 73,686 | ... | ... | ... | ... | 11,74[illegible] | 3,61[illegible] | ... | .. | .. | ... | . | 348 | 3,966 |
| 22 | Upper Sind Frontier ... ... | | ... | 2,459 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5,856 | 8,315 | ... | ... | ... | ... | 898 | 50 | ... | ... | .. | .. | ... | ... | 50 |
| 23 | Thar and Párkar ... ... ... | | Not available. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Total B. ... | 2 | 21,597 | 5,624 | 2,156 | 8,041 | ... | ... | ... | ... | 20 | ... | ... | 79,842 | 117,282 | ... | ... | ... | ... | 32,787 | 7,964 | 120 | ... | ... | ... | ... | 360 | 8,444 |
| | | Grand Total ... | 628,500 | 734,243 | 184,597 | 133,361 | 317,888 | 91,652 | 16,733 | 458,606 | 23,557 | 20,066 | 57,661 | 16,358 | 80,397 | 2763,619 | ... | ... | ... | ... | 175,623 | 94,140 | 1,608 | ... | 137 | 12 | ... | 360 | 96,257 |

# III.—Crops, 1886-87—*continued.*

| No. | District. | | V.—Condiments and Spices. | | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cardamom (Veldode), Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (Ale), Zingiber officinale. | Black Pepper (Miri), Piper nigrum. | Betel-leaves (Pâne), Piper-betel. | Betel-nut (Supâri), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bâlant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jire), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Râi) Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us, Sherdi), Saccharum officinarum. | Others. | Total VII. |
| | 1 | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwâri ... ... ... | ... | 948 | 487 | ... | ... | ... | ... | 176 | 134 | ... | 22 | ... | 54 | 19 | 65 | 5 | 1,910 | ... | ... | ... | 2,844 | ... | 2,844 |
| | | Other Government ... ... | ... | 105 | ... | ... | ... | ... | ... | ... | ... | ... | 5 | ... | 1 | ... | ... | ... | 111 | ... | ... | ... | 708 | ... | 708 |
| | | Alienated ... ... ... | ... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9 | ... | ... | ... | 19 | ... | ... | ... | 74 | ... | 74 |
| | | Total ... | ... | 1,063 | 487 | ... | ... | ... | ... | 176 | 134 | ... | 27 | ... | 64 | 19 | 65 | 5 | 2,040 | ... | ... | ... | 3,626 | ... | 3,626 |
| 2 | Kaira ... ... | Rayatwâri ... ... ... | ... | 446 | 145 | ... | ... | ... | 18 | 251 | 4 | ... | 352 | 1 | 68 | 58 | 58 | 127 | 1,528 | ... | ... | ... | 1,158 | ... | 1,158 |
| | | Other Government ... ... | ... | 192 | 72 | ... | ... | ... | 4 | ... | ... | ... | 650 | 1 | 6 | ... | 19 | 63 | 1,007 | 3 | ... | 3 | 927 | ... | 927 |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 638 | 217 | ... | ... | ... | 22 | 251 | 4 | ... | 1,002 | 2 | 74 | 58 | 77 | 190 | 2,535 | 3 | ... | 3 | 2,085 | ... | 2,085 |
| 3 | Panch Maháls... | Rayatwâri ... ... ... | ... | 383 | 5 | ... | ... | ... | 4 | ... | 7 | ... | 20 | ... | 28 | ... | 16 | ... | 463 | ... | ... | ... | 435 | ... | 435 |
| | | Other Government ... ... | ... | 296 | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 15 | ... | 318 | ... | ... | ... | 44 | ... | 44 |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | 5 | ... | 5 |
| | | Total ... | .. | 679 | 12 | ... | ... | ... | 4 | ... | 7 | ... | 20 | ... | 28 | ... | 31 | ... | 781 | ... | ... | ... | 484 | ... | 484 |
| 4 | Broach ... ... | Rayatwâri ... ... ... | ... | 146 | 55 | ... | ... | ... | 36 | ... | 4 | 30 | ... | ... | 11 | 52 | 39 | ... | 373 | ... | ... | ... | 135 | ... | 135 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 146 | 55 | ... | ... | ... | 36 | ... | 4 | 30 | ... | ... | 11 | 52 | 39 | ... | 373 | ... | ... | ... | 135 | ... | 135 |
| 5 | Surat ... ... | Rayatwâri ... ... ... | ... | 503 | 182 | ... | ... | ... | 67 | ... | 5 | 12 | ... | 42 | 68 | 100 | 89 | 21 | 1,089 | .. | ... | ... | 6,957 | ... | 6,957 |
| | | Other Government ... ... | ... | 14 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 17 | ... | ... | ... | 109 | ... | 109 |
| | | Alienated ... ... ... | ... | 36 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | 36 | ... | ... | ... | 9 | ... | 9 |
| | | Total ... | ... | 553 | 183 | ... | ... | ... | 67 | ... | 5 | 12 | ... | 42 | 70 | 100 | 89 | 21 | 1,142 | ... | ... | ... | 7,075 | ... | 7,075 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwâri ... ... ... | ... | 7,539 | 3 | ... | 247 | ... | 169 | 2,295 | 2,209 | 4,989 | ... | 1,586 | 151 | 337 | 188 | ... | 19,713 | ... | ... | ... | 2,630 | ... | 2,630 |
| | | Other Government ... ... | ... | 13 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 14 | ... | ... | 27 | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 71 | ... | ... | 3 | ... | 29 | 64 | ... | ... | ... | 20 | ... | 42 | 15 | ... | 244 | ... | ... | ... | 75 | ... | 75 |
| | | Total ... | ... | 7,623 | 3 | ... | 250 | ... | 198 | 2,359 | 2,209 | 4,989 | ... | 1,606 | 151 | 393 | 203 | ... | 19,984 | ... | ... | ... | 2,705 | ... | 2,705 |
| 7 | Násik ... ... | Rayatwâri ... ... ... | ... | 4,063 | 11 | ... | 200 | 1 | 62 | 16 | 1 | 8 | ... | 2 | 242 | 26 | 414 | ... | 5,046 | ... | 1 | 1 | 8,540 | ... | 8,540 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 429 | ... | ... | 37 | ... | ... | ... | ... | ... | ... | ... | 6 | ... | 60 | ... | 532 | ... | ... | ... | 865 | ... | 865 |
| | | Total ... | ... | 4,492 | 11 | ... | 237 | 1 | 62 | 16 | 1 | 8 | ... | 2 | 248 | 26 | 474 | ... | 5,578 | ... | 1 | 1 | 9,405 | ... | 9,405 |
| 8 | Ahmadnagar ... | Rayatwâri ... ... ... | ... | 4,140 | ... | ... | 403 | ... | 9 | ... | 1 | 1 | ... | ... | ... | 2 | 61 | ... | 4,617 | ... | ... | ... | 4,062 | ... | 4,062 |
| | | Other Government ... ... | ... | 214 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | 217 | ... | ... | ... | 119 | ... | 119 |
| | | Alienated ... ... ... | ... | 268 | ... | ... | 7 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 277 | ... | ... | ... | 275 | ... | 275 |
| | | Total ... | ... | 4,622 | ... | ... | 410 | ... | 10 | ... | 1 | 1 | ... | ... | ... | 2 | 65 | ... | 5,111 | ... | .. | ... | 4,456 | ... | 4,456 |
| 9 | Poona ... ... | Rayatwâri ... ... ... | ... | 9,642 | 12 | ... | 359 | ... | 59 | 25 | ... | 569 | ... | ... | 18 | 36 | 588 | ... | 11,308 | ... | ... | ... | 8,799 | ... | 8,799 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 1,510 | ... | ... | 430 | ... | 46 | ... | ... | 31 | ... | ... | ... | ... | 101 | ... | 2,118 | ... | ... | ... | 2,875 | ... | 2,875 |
| | | Total ... | ... | 11,152 | 12 | ... | 789 | ... | 105 | 25 | ... | 600 | ... | ... | 18 | 36 | 689 | ... | 13,426 | ... | ... | ... | 11,674 | ... | 11,674 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwari ... | 6,557 | ... | ... | 272 | ... | 1,282 | ... | ... | 143 | 24 | ... | ... | ... | 80 | ... | 8,358 | ... | ... | ... | 2,525 | ... | 2,525 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 269 | ... | ... | ... | ... | 8 | ... | ... | 42 | ... | ... | ... | ... | ... | ... | 319 | ... | ... | ... | 96 | ... | 96 |
| | | Total ... | 6,826 | ... | ... | 272 | ... | 1,290 | ... | ... | 185 | 24 | ... | ... | ... | 80 | ... | 8,677 | ... | ... | ... | 2,621 | ... | 2,621 |
| 11 | Sátára | Rayatwári... | 9,472 | 26 | ... | 303 | 3 | 3,086 | 268 | ... | 239 | ... | 69 | 3 | ... | 543 | ... | 14,012 | ... | ... | ... | 10,444 | ... | 10,444 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 2,765 | 44 | ... | 62 | ... | 822 | 103 | 5 | 102 | ... | 25 | ... | 1 | 83 | ... | 4,012 | ... | ... | ... | 3,093 | ... | 3,093 |
| | | Total ... | 12,237 | 70 | ... | 365 | 3 | 3,908 | 371 | 5 | 341 | ... | 94 | 3 | 1 | 626 | ... | 18,024 | ... | ... | ... | 13,537 | ... | 13,537 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayátwári ... | 12,988 | ... | ... | 95 | ... | 161 | ... | 82 | 660 | 4 | ... | 68 | 126 | 720 | ... | 14,904 | ... | ... | ... | 6,647 | ... | 6,647 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 2,803 | ... | ... | 81 | 8 | 58 | ... | 37 | 557 | ... | ... | 1 | ... | 214 | ... | 3,759 | ... | ... | ... | 2,185 | ... | 2,185 |
| | | Total ... | 15,791 | ... | ... | 176 | 8 | 219 | ... | 119 | 1,217 | 4 | ... | 69 | 126 | 934 | ... | 18,663 | ... | ... | ... | 8,832 | ... | 8,832 |
| 13 | Bijápur | Rayatwári ... | 3,341 | ... | ... | 56 | ... | 13 | 2 | ... | 14 | ... | ... | 1 | 4 | 133 | ... | 3,564 | ... | ... | ... | 1,185 | ... | 1,185 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 399 | ... | ... | 5 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 18 | ... | 423 | ... | ... | ... | 118 | ... | 118 |
| | | Total ... | 3,740 | ... | ... | 61 | ... | 14 | 2 | ... | 14 | ... | ... | 1 | 4 | 151 | ... | 3,987 | ... | ... | ... | 1,303 | ... | 1,303 |
| 14 | Dhárwár | Rayatwári... | 35,595 | 1 | ... | 1,060 | 487 | 49 | 2 | ... | 456 | ... | 13 | ... | 59 | 942 | 1 | 38,665 | ... | ... | ... | 4,339 | ... | 4,339 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,292 | ... | ... | 50 | 38 | ... | 4 | ... | 3 | ... | 1 | ... | ... | ... | 1 | 1,389 | ... | ... | ... | 392 | ... | 392 |
| | | Total ... | 36,887 | 1 | ... | 1,110 | 525 | 49 | 6 | ... | 459 | ... | 14 | ... | 59 | 942 | 2 | 40,054 | ... | ... | ... | 4,731 | ... | 4,731 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári ... | 340 | 212 | ... | 178 | 11 | 49 | ... | ... | 638 | ... | ... | ... | 6 | 4 | ... | 1,438 | ... | ... | ... | 1,751 | ... | 1,751 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 340 | 212 | ... | 178 | 11 | 49 | ... | ... | 638 | ... | ... | ... | 6 | 4 | ... | 1,438 | ... | ... | ... | 1,751 | ... | 1,751 |
| 16 | Kolába | Rayatwári ... | 31 | ... | ... | 24 | 402 | ... | ... | ... | 69 | ... | ... | ... | ... | ... | ... | 526 | ... | ... | ... | 57 | ... | 57 |
| | | Other Government | 23 | ... | ... | ... | 1 | 13 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 37 | ... | ... | ... | 89 | ... | 89 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 54 | ... | ... | 24 | 403 | 13 | ... | ... | 69 | ... | ... | ... | ... | ... | ... | 563 | ... | ... | ... | 146 | ... | 146 |
| 17 | Ratnágiri | Rayatwári... | Not received | | | | | | | | | | | | | | | | | | | | | |
| | | Other Government | | | | | | | | | | | | | | | | | | | | | | |
| | | Alienated ... | | | | | | | | | | | | | | | | | | | | | | |
| | | Total ... | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Kánara | Rayatwári... | 740 | 216 | 6 | 912 | 265 | 7,345 | 68 | ... | 7 | ... | ... | ... | ... | 3 | 258 | 9,820 | ... | ... | ... | 2,902 | ... | 2,902 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 740 | 216 | 6 | 912 | 265 | 7,345 | 68 | ... | 7 | ... | ... | ... | ... | 3 | 258 | 9,820 | ... | ... | ... | 2,902 | ... | 2,902 |
| | Total A. | Rayatwári ... | 740 | 96,350 | 1,145 | 912 | 3,462 | 8,249 | 5,132 | 3,035 | 2,447 | 7,835 | 422 | 1,713 | 712 | 825 | 3,943 | 412 | 137,334 | ... | 1 | 1 | 65,410 | ... | 65,410 |
| | | Other Government | ... | 857 | 80 | ... | ... | 1 | 17 | ... | ... | ... | 665 | 1 | 9 | 14 | 37 | 63 | 1,734 | 3 | ... | 3 | 1,996 | ... | 1,996 |
| | | Alienated ... | ... | 9,852 | 44 | ... | 675 | 46 | 965 | 171 | 42 | 735 | ... | 46 | 16 | 43 | 492 | 1 | 13,128 | ... | ... | ... | 10,062 | ... | 10,062 |
| | | Total ... | 740 | 107,059 | 1,269 | 912 | 4,137 | 8,296 | 6,114 | 3,206 | 2,489 | 8,570 | 1,077 | 1,760 | 737 | 882 | 4,472 | 476 | 152,196 | 3 | 1 | 4 | 77,468 | ... | 77,468 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | ... | ... | 6 | ... | ... | ... | ... | ... | ... | ... | 42 | 87 | ... | ... | 7,334 | ... | 10 | 7,479 | ... | 1 | 1 | 475 | 1 | 476 |
| 20 | Hyderabad ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 60 | 60 | ... | 10 | 10 | 686 | 1 | 687 |
| 21 | Shikárpur ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,726 | 2,726 | ... | 1 | 1 | 757 | 705 | 1,462 |
| 22 | Upper Sind Frontier | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 61 | 61 | ... | ... | ... | 8 | ... | 8 |
| 23 | Thar and Párkar ... | ... | Not available | | | | | | | | | | | | | | | | | | | | | | |
| | | Total B. ... | ... | 6 | ... | ... | ... | ... | ... | ... | ... | 42 | 87 | ... | ... | 7,334 | ... | 2,857 | 10,326 | ... | 12 | 12 | 1,926 | 707 | 2,633 |
| | | Grand Total ... | 740 | 107,065 | 1,269 | 912 | 4,137 | 8,296 | 6,114 | 3,206 | 2,489 | 8,612 | 1,164 | 1,760 | 737 | 8,216 | 4,472 | 3,333 | 162,522 | 3 | 13 | 16 | 79,394 | 707 | 80,101 |

# III.—Crops, 1886-87—*continued.*

| No. | District. | VIII.—Oil Seeds. Sesame (Til), Sesamum Indicum. | Linseed, (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Firandya), Ricinus communis | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Niger-seed (Khurásni), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobare), Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli), Indigofera tinctoria. | Safflower (Kusumba), Carthamus Persicus. | Morinda (Al, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tág.) Crotalaria juncea. | Hemp (Ambádi, Sheria), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 84 | 85 | 86 | 88 | 89 | 90 | 91 | 92 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | | Acres. | Acres. | Acres. |
| 1 | Ahmadabad ... Rayatwári... | 18,215 | 4,495 | 4,969 | 74 | 394 | ... | ... | ... | ... | 28,147 | 245 | 412 | ... | ... | 657 | 145,226 | 1,222 | ... | ... | ... | 92 | 146,540 | 467 | 714,450 | 17,982 | 696,468 |
| | Other Govt. | 15,893 | 810 | 1,758 | 14 | 245 | ... | ... | ... | ... | 18,720 | ... | 18 | ... | ... | 18 | 196,203 | 1,021 | ... | ... | ... | 70 | 197,294 | 66 | 662,206 | 2,027 | 660,179 |
| | Alienated ... | 1,803 | 33 | 275 | .. | ... | ... | ... | ... | ... | 2,111 | ... | ... | ... | ... | ... | 15,170 | 5 | ... | ... | ... | 3 | 15,178 | ... | 53,856 | 384 | 53,472 |
| | Total ... | 35,911 | 5,338 | 7,002 | 88 | 639 | ... | ... | ... | ... | 48,978 | 245 | 430 | ... | ... | 675 | 356,599 | 2,248 | ... | ... | ... | 165 | 359,012 | 533 | 1,430,512 | 20,393 | 1,410,119 |
| 2 | Kaira ... Rayatwári... | 4,047 | 100 | 3,079 | 1,087 | 138 | ... | ... | ... | ... | 8,451 | 149 | 1,869 | ... | ... | 2,018 | 6,219 | 84 | 826 | ... | ... | ... | 7,129 | 28 | 590,509 | 40,033 | 550,476 |
| | Other Govt. | 1,455 | 3 | 618 | 5 | 74 | ... | ... | ... | ... | 2,155 | 127 | 158 | ... | ... | 285 | 3,609 | 4 | 740 | ... | ... | ... | 4,353 | 8 | 159,451 | 5,927 | 153,524 |
| | Alienated ... | ... | .. | ... | .. | ... | ... | ... | ... | ... | ..... | ... | ... | .. | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Total ... | 5,502 | 103 | 3,697 | 1,092 | 212 | ... | ... | ... | ... | 10,606 | 276 | 2,027 | ... | ... | 2,303 | 9,828 | 88 | 1,566 | ... | .. | ... | 11,482 | 36 | 749,960 | 45,960 | 704,000 |
| 3 | Panch Maháls ... Rayatwári... | 21,240 | 75 | 1,273 | ... | 359 | 10,979 | .. | .. | ... | 33,926 | ... | ... | ... | ... | ... | 129 | 1,443 | 428 | ... | ... | ... | 2,000 | ... | 287,254 | 52,436 | 234,818 |
| | Other Govt. | 872 | .. | 260 | .. | 43 | ... | ... | ... | ... | 1,175 | ... | ... | ... | ... | ... | 573 | 170 | 37 | ... | ... | ... | 780 | ... | 27,625 | 2,350 | 25,275 |
| | Alienated ... | 175 | .. | 144 | ... | ... | ... | .. | ... | ... | 319 | ... | ... | ... | ... | ... | ..... | ... | 79 | ... | ... | ... | 79 | ... | 14,775 | 224 | 14,551 |
| | Total ... | 22,287 | 75 | 1,677 | ... | 402 | 10,979 | ... | ... | ... | 35,420 | ... | ... | ... | ... | ... | 702 | 1,613 | 544 | ... | ... | ... | 2,859 | ... | 329,654 | 55,010 | 274,644 |
| 4 | Broach ... Rayatwári.. | 16,577 | .. | 2,620 | ... | ... | ... | ... | ... | ... | 19,197 | 443 | 11 | ... | ... | 454 | 206,860 | 67 | 13 | ... | ... | ... | 206,940 | 63 | 567,514 | 3,724 | 563,790 |
| | Other Govt. | 14 | .. | ... | ... | ... | ... | ... | .. | ... | 14 | ... | ... | ... | ... | ... | 295 | ... | ... | ... | ... | ... | 295 | ... | 993 | ... | 993 |
| | Alienated ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Total ... | 16,591 | ... | 2,620 | ... | ... | ... | ... | ... | ... | 19,211 | 443 | 11 | ... | ... | 454 | 207,155 | 67 | 13 | ... | ... | ... | 207,235 | 63 | 568,507 | 3,724 | 564,783 |
| 5 | Surat ... Rayatwári... | 4,421 | 13 | 41,085 | ... | 12 | 110 | 136 | ... | ... | 45,777 | ... | 40 | 29 | ... | 69 | 96,751 | 3,063 | 48 | ... | ... | ... | 99,862 | 78 | 539,451 | 71,279 | 468,172 |
| | Other Govt. | 34 | .. | 474 | ... | ... | ... | 7 | ... | ... | 515 | ... | ... | ... | ... | ... | 1,125 | 14 | ... | ... | ... | ... | 1,139 | ... | 6,070 | 623 | 5,447 |
| | Alienated ... | 3 | .. | 84 | ... | ... | ... | 5 | ... | ... | 92 | ... | ... | ... | ... | ... | 239 | 4 | ... | ... | ... | ... | 243 | ... | 3,918 | 70 | 3,848 |
| | Total ... | 4,458 | 13 | 41,643 | ... | 12 | 110 | 148 | ... | ... | 46,384 | ... | 40 | 29 | ... | 69 | 98,115 | 3,081 | 48 | ... | ... | ... | 101,244 | 78 | 549,439 | 71,972 | 477,467 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. Rayatwári... | 139,252 | 99,129 | 4,935 | 2,461 | ... | 6,346 | 5,248 | ... | ... | 257,371 | 3,010 | 6 | 3,714 | ... | 6,730 | 912,630 | 840 | 3,161 | ... | ... | ... | 916,631 | 34 | 2,767,620 | 12,943 | 2,754,677 |
| | Other Govt. | 4,636 | 1,496 | 248 | ... | ... | 1,665 | ... | ... | ... | 8,045 | ... | ... | ... | ... | ... | 3,709 | 561 | 15 | ... | ... | ... | 4,285 | ... | 48,652 | ... | 48,652 |
| | Alienated ... | 3,364 | 1,256 | 63 | 8 | ... | 228 | 51 | ... | ... | 4,970 | ... | ... | ... | ... | ... | 25,320 | 68 | 180 | ... | ... | ... | 25,568 | ... | 67,256 | 260 | 66,99 |
| | Total ... | 147,252 | 101,881 | 5,246 | 2,469 | ... | 8,239 | 5,299 | ... | ... | 270,386 | 3,010 | 6 | 3714 | ... | 6,730 | 941,659 | 1,469 | 3,356 | ... | ... | ... | 946,484 | 34 | 2,883,528 | 13,203 | 2,870,325 |
| 7 | Násik ... Rayatwári... | 50,611 | 93,864 | 5,300 | 9,094 | ... | 121,265 | 14,144 | ... | ... | 294,278 | ... | ... | ... | ... | ... | 19,437 | 3,003 | 135 | ... | ... | ... | 22,575 | ... | 1,850,153 | 27,994 | 1,822,159 |
| | Other Govt. | ... | .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Alienated ... | 1,171 | 4,984 | 94 | 453 | ... | 4,706 | 1,057 | ... | ... | 12,465 | ... | ... | ... | ... | ... | 240 | 226 | ... | ... | ... | ... | 466 | ... | 103,674 | 1,440 | 102,234 |
| | Total ... | 51,782 | 98,848 | 5,394 | 9,547 | ... | 125,971 | 15,201 | ... | ... | 306,743 | ... | ... | ... | ... | ... | 19,677 | 3,229 | 135 | ... | ... | ... | 23,041 | ... | 1,953,827 | 29,434 | 1,924,393 |
| 8 | Ahmadnagar ... Rayatwári... | 18,294 | 20,740 | 528 | 63,113 | ... | 31,447 | 3,979 | ... | ... | 138,101 | 134 | ... | ... | ... | 134 | 45,112 | 268 | 11,378 | ... | ... | ... | 56,758 | 7 | 2,342,043 | 34,649 | 2,307,394 |
| | Other Govt. | 1,638 | 2,332 | 273 | 5,107 | ... | 535 | 105 | ... | ... | 9,990 | ... | ... | ... | ... | ... | 4,236 | 1 | 1,075 | ... | ... | ... | 5,312 | 2 | 154,818 | 1,054 | 153,764 |
| | Alienated ... | 1,886 | 1,011 | 10 | 3,372 | ... | 40 | 52 | ... | ... | 6,371 | ... | ... | ... | ... | ... | 7,915 | 43 | 330 | ... | ... | ... | 8,288 | ... | 164,345 | 616 | 163,729 |
| | Total | 21,818 | 24,083 | 811 | 71,592 | ... | 32,022 | 4,136 | ... | ... | 154,462 | 134 | ... | ... | ... | 134 | 57,263 | 312 | 12,783 | ... | ... | ... | 70,358 | 9 | 2,661,206 | 36,319 | 2,624,887 |
| 9 | Poona ... Rayatwári... | 22,873 | 1,194 | 220 | 75,696 | ... | 28,512 | 7,384 | ... | ... | 135,879 | 5 | ... | ... | ... | 5 | 9,785 | 311 | 5,909 | ... | ... | ... | 16,005 | 162 | 1,831,502 | 61,001 | 1,770,501 |
| | Other Govt. | ... | .. | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Alienated ... | 4,493 | 245 | ... | 8,126 | ... | 2,535 | 1,961 | ... | ... | 17,360 | ... | ... | ... | ... | ... | 400 | 83 | 604 | ... | ... | ... | 1,087 | 720 | 322,653 | 9,720 | 312,933 |
| | Total ... | 27,366 | 1,439 | 220 | 83,822 | ... | 31,047 | 9,345 | ... | ... | 153,239 | 5 | ... | ... | ... | 5 | 10,185 | 394 | 6,513 | ... | ... | ... | 17,092 | 882 | 2,154,155 | 70,721 | 2,083,443 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 6,350 | 52,812 | 7,163 | 109,982 | ... | 18,239 | 32,839 | ... | ... | 227,325 | ... | ... | 379 | ... | 379 | 26,985 | 191 | 28,642 | ... | ... | ... | 55,818 | 27 | 1,982,666 | 24,927 | 1,957,[illegible] |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 445 | 1,228 | 264 | 3,225 | ... | 586 | 1,090 | ... | ... | 6,838 | ... | ... | ... | ... | ... | 1,243 | .. | 534 | ... | ... | ... | 1,777 | ... | 86,599 | 1,596 | 85,003 |
| | | Total | 6,795 | 54,040 | 7,367 | 113207 | ... | 18,825 | 33,929 | ... | ... | 234,163 | ... | ... | 379 | ... | 379 | 28,228 | 191 | 29,176 | ... | ... | ... | 57,595 | 27 | 2,069,265 | 26,523 | 2,042,742 |
| | [illegible]ára | Rayatwári | 131 | 2,551 | 628 | 19,823 | 10 | 17,201 | 35,224 | ... | 1 | 75,574 | ... | ... | ... | ... | ... | 12,323 | 4,167 | 7,346 | ... | ... | 1 | 23,837 | 228 | 1,557,541 | 83,443 | 1,474,098 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 12 | 615 | 161 | 3,208 | ... | 4,867 | 11,632 | ... | ... | 20,295 | ... | ... | ... | ... | ... | 953 | 1,013 | 1,313 | ... | ... | ... | 3,279 | 2 | 326,409 | 20,729 | 305,680 |
| | | Total | 143 | 3,166 | 789 | 23,036 | 10 | 21,868 | 46,856 | ... | 1 | 95,869 | ... | ... | ... | ... | ... | 13,276 | 5,180 | 8,659 | ... | ... | 1 | 27,116 | 230 | 1,883,950 | 104,172 | 1,779,778 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 7,367 | 2,221 | 11,496 | 27,298 | ... | 1,800 | 9,275 | ... | ... | 59,457 | ... | 2 | ... | ... | 2 | 158,699 | 2,674 | 2,688 | ... | ... | ... | 164,061 | 12 | 1,430,663 | 33,795 | 1,396,868 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 1,082 | 74 | 2,939 | 9,456 | ... | 409 | 2,070 | ... | ... | 16,030 | ... | ... | ... | ... | ... | 29,620 | 2,265 | 800 | ... | ... | ... | 32,685 | ... | 331,638 | 7,902 | 323,736 |
| | | Total | 8,449 | 2,295 | 14,435 | 36,754 | ... | 2,209 | 11,345 | ... | ... | 75,487 | ... | 2 | ... | ... | 2 | 188,319 | 4,939 | 3,488 | ... | ... | ... | 196,746 | 12 | 1,762,301 | 41,697 | 1,720,604 |
| 13 | Bijápur | Rayatwári | 13,596 | 92,651 | 8,480 | 66,810 | ... | 27,978 | 42 | ... | ... | 209,557 | ... | ... | ... | ... | ... | 365,881 | 161 | 12,630 | ... | ... | ... | 378,672 | 11 | 2,337,807 | 3,129 | 2,334,678 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 1,536 | 8,712 | 1,070 | 7,192 | ... | 1,919 | 8 | ... | ... | 20,437 | ... | ... | ... | ... | ... | 51,203 | 13 | 1,294 | ... | ... | ... | 52,510 | 1 | 271,973 | 167 | 271,806 |
| | | Total | 15,132 | 101,363 | 9,550 | 74,002 | .. | 29,897 | 50 | ... | ... | 229,994 | ... | ... | ... | ... | ... | 417,084 | 174 | 13,924 | ... | ... | ... | 431,182 | 12 | 2,609,780 | 3,296 | 2,606,484 |
| 14 | Dhárwár | Rayatwári | 4,118 | 17,044 | 19,057 | 35,976 | ... | 2,553 | ... | ... | 1 | 78,758 | ... | ... | ... | ... | ... | 477,914 | 179 | 5,370 | ... | ... | ... | 483,463 | 13 | 1,958,174 | 25,408 | 1,932,766 |
| | | Other Govt. | 2 | ... | 11 | ... | ... | ... | ... | ... | ... | 13 | ... | ... | ... | ... | .. | 32 | .. | 2 | ... | ... | ... | 34 | ... | 332 | ... | 332 |
| | | Alienated | 74 | 1,504 | 1,061 | 1,179 | ... | 241 | ... | ... | ... | 4,059 | ... | ... | ... | ... | ... | 13,993 | 21 | 314 | ... | ... | ... | 14,328 | 1 | 108,555 | 1,385 | 107,170 |
| | | Total | 4,194 | 18,548 | 20,139 | 37,155 | ... | 2,794 | ... | ... | 1 | 82,831 | ... | ... | ... | ... | ... | 491,939 | 200 | 5,686 | ... | ... | ... | 497,825 | 14 | 2,067,061 | 26,793 | 2,040,268 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 6,134 | 1 | 3,558 | ... | 37 | 12,09[illegible] | ... | ... | 44 | 21,869 | ... | ... | ... | ... | ... | ..... | 3,110 | 1,903 | ... | ... | ... | 5,013 | 1 | 521,226 | 7,395 | 513,831 |
| | | Other Govt | ... | ... | .. | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | 1,072 | 7 | 1,065 |
| | | Alienated | 2 | ... | ... | ... | ... | 92 | ... | ... | ... | 94 | ... | ... | ... | ... | .. | ..... | .. | ... | ... | ... | ... | ..... | ... | 8,146 | 40 | 8,106 |
| | | Total | 6,136 | 1 | 3,558 | ... | 37 | 12,187 | ... | ... | 44 | 21,963 | ... | ... | ... | ... | ... | ... | 3,110 | 1,903 | ... | ... | ... | 5,013 | 1 | 530,444 | 7,442 | 523,002 |
| 16 | Kolába | Rayatwári | 1,205 | ... | 4 | ... | ... | 38 | .. | ... | 134 | 1,381 | ... | ... | ... | ... | ... | ..... | 144 | 10 | ... | ... | ... | 154 | 2 | 180,311 | 4,896 | 175,415 |
| | | Other Govt. | 5,244 | ... | ... | ... | ... | 70 | ... | ... | ... | 5,314 | ... | ... | ... | ... | ... | ..... | 115 | 29 | ... | ... | ... | 144 | ... | 191,163 | 4,874 | 186,289 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | 1,071 | 6 | 1,065 |
| | | Total | 6,449 | ... | 4 | ... | ... | 108 | ... | ... | 134 | 6,695 | ... | ... | ... | ... | ... | ... | 259 | 39 | ... | ... | ... | 298 | 2 | 372,545 | 9,776 | 362,769 |
| 17 | Ratnágiri | Rayatwári | Not received. | | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | 40,118 | 1,102 | 39,016 |
| | | Other Govt. | | | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | 557,068 | 45,843 | 511,225 |
| | | Alienated | | | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | 16,267 | 1,125 | 15,142 |
| | | Total | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 613,453 | 48,070 | 565,383 |
| 18 | Kánara | Rayatwári | 193 | 2 | 326 | 20 | ... | 113 | ... | ... | 290 | 944 | ... | ... | ... | ... | ... | ..... | 60 | 124 | ... | ... | ... | 184 | 24 | 224,387 | 11,017 | 213,370 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | .. | ... | ... | ... | ..... | .. | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total | 193 | 2 | 326 | 20 | ... | 113 | ... | ... | 290 | 944 | ... | ... | ... | ... | ... | ... | 60 | 124 | ... | ... | ... | 184 | 24 | 224,387 | 11,017 | 213,370 |
| | Total A. | Rayatwári | 334,624 | 386,892 | 114,671 | 411,439 | 950 | 278,676 | 108,271 | ... | 470 | 1,635,993 | 3,986 | 2,340 | 4,122 | ... | 10,448 | 2,483,951 | 20,987 | 80,611 | ... | ... | 93 | 25,85,652 | 1,157 | 21,723,389 | 517,153 | 21,206,236 |
| | | Other Govt. | 29,788 | 4,641 | 3,642 | 5,126 | 362 | 2,270 | 112 | ... | ... | 45,941 | 127 | 176 | ... | ... | 303 | 209,782 | 1,886 | 1,898 | ... | ... | 70 | 213,636 | 76 | 1,809,450 | 62,705 | 1,746,745 |
| | | Alienated | 16,046 | 19,662 | 6,165 | 36,219 | ... | 15,423 | 17,926 | ... | ... | 111,441 | ... | ... | ... | ... | ... | 146,296 | 3,741 | 5,448 | ... | ... | 3 | 155,488 | 724 | 1,881,135 | 45,664 | 1,835,471 |
| | | Total | 380,458 | 411,195 | 124,478 | 452,784 | 1,312 | 296,369 | 126,309 | ... | 470 | 1,793,375 | 4,113 | 2,516 | 4,122 | ... | 10,751 | 28,40,029 | 26,614 | 87,957 | ... | .. | 166 | 29,54,766 | 1,957 | 25,413,974 | 625,522 | 24,788,452 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 5,893 | ... | ... | ... | 8,060 | ... | ... | ... | 13,960 | 27,913 | 69 | 1 | ... | ... | 70 | 848 | ... | ... | 50 | ... | ... | 898 | ... | 246,470 | 15,527 | 230,943 |
| 20 | Hyderabad | | 33,369 | 2 | ... | ... | 16,636 | ... | ... | ... | 6,691 | 56,698 | ... | ... | ... | 5,839 | 5,839 | 58,008 | ... | ... | ... | ... | 467 | 58,475 | ... | 571,028 | 5,732 | 565,296 |
| 21 | Shikárpur | | 13,366 | ... | ... | ... | ... | ... | ... | ... | 29,694 | 43,060 | ... | .. | ... | 2,096 | 2,096 | 6,727 | ... | ... | ... | ... | 63 | 6,790 | ... | 727,305 | 94,124 | 633,181 |
| 22 | Upper Sind Frontier | | 37,041 | ... | ... | ... | ... | ... | ... | ... | 3,958 | 40,999 | ... | ... | ... | 395 | 395 | 1,096 | ... | ... | ... | ... | 16 | 1,112 | ... | 145,781 | 7,733 | 138,048 |
| 23 | Thar and Párkar | | Not available. | | | | | | | | | | | | | | | Not available | | | | | | | | | | |
| | Total B. | | 89,669 | 2 | ... | ... | 24,696 | ... | ... | ... | 54,303 | 168,670 | 69 | 1 | ... | 8,330 | 8,400 | 66,679 | ... | ... | 50 | ... | 546 | 67,275 | ... | 1,690,584 | 123,116 | 1,567,468 |
| | Grand Total | | 470,127 | 411,197 | 124,478 | 452,784 | 26,008 | 296,369 | 126,309 | ... | 54,773 | 1,962,045 | 4,182 | 2,517 | 4,122 | 8,330 | 19,151 | 2,906,708 | 26,614 | 87,957 | 50 | ... | 712 | 3,022,041 | 1,957 | 27,104,558 | 748,638 | 26,355,920 |

# IV.—Irrigation, 1886-87.

| No. | District. | | Net Area cropped. | Area irrigated from canals. | Area irrigated from other sources. | Total Area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct area cropped with irrigation more than once. | Balance net irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad... | Rayatwári | 696,468 | 3,381 | 44,365 | 47,746 | 12,745 | 17,030 | 11,525 | 2,841 | 2,987 | 2,064 | 40 | 49,232 | 1,486 | 47,746 |
| | | Other Government | 660,179 | 137 | 6,990 | 7,127 | 3,061 | 1,390 | 1,556 | 687 | 373 | 60 | .... | 7,127 | .... | 7,127 |
| | | Alienated | 53,472 | 214 | 594 | 808 | 397 | 152 | 189 | 56 | 5 | 9 | .... | 808 | .... | 808 |
| | | Total ... | 1,410,119 | 3,732 | 51,949 | 55,681 | 16,203 | 18,572 | 13,270 | 3,584 | 3,365 | 2,133 | 40 | 57,167 | 1,486 | 55,681 |
| 2 | Kaira... | Rayatwári | 550,476 | 10,811 | 23,529 | 34,340 | 6,374 | 12,680 | 7,784 | 1,152 | 2,469 | 6,067 | 410 | 36,936 | 2,596 | 34,340 |
| | | Other Government | 153,524 | .... | 15,569 | 15,569 | 943 | 456 | 1,698 | 934 | 1,481 | 10,580 | 480 | 16,572 | 1,003 | 15,569 |
| | | Alienated | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 704,000 | 10,811 | 39,098 | 49,909 | 7,317 | 13,136 | 9,482 | 2,086 | 3,950 | 16,647 | 890 | 53,508 | 3,599 | 49,909 |
| 3 | Panch Maháls. | Rayatwári | 234,818 | 201 | 1,133 | 1,334 | 273 | 135 | 110 | 435 | 266 | 139 | 2 | 1,360 | 26 | 1,334 |
| | | Other Government | 25,275 | .... | 364 | 364 | 215 | .... | 25 | 44 | 29 | 51 | .... | 364 | .... | 364 |
| | | Alienated | 14,551 | .... | 11 | 11 | .... | .... | 2 | 5 | 3 | 1 | .... | 11 | .... | 11 |
| | | Total ... | 274,644 | 201 | 1,508 | 1,709 | 488 | 135 | 137 | 484 | 298 | 191 | 2 | 1,735 | 26 | 1,709 |
| 4 | Broach ... | Rayatwári | 563,790 | .... | 1,274 | 1,274 | 9 | 527 | 17 | 106 | 454 | 171 | .... | 1,284 | 10 | 1,274 |
| | | Other Government | 993 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 564,783 | ... | 1,274 | 1,274 | 9 | 527 | 17 | 106 | 454 | 171 | ..... | 1,284 | 10 | 1,274 |
| 5 | Surat... | Rayatwári | 468,172 | .... | 12,481 | 12,481 | 41 | 3,454 | 10 | 6,957 | 1,666 | 390 | .... | 12,518 | 37 | 12,481 |
| | | Other Government | 5,447 | .... | 448 | 448 | .... | 325 | .... | 108 | 3 | 12 | .... | 448 | .... | 448 |
| | | Alienated | 3,848 | .... | 7 | 7 | .... | .... | .... | 7 | .... | .... | .... | 7 | .... | 7 |
| | | Total ... | 477,467 | ... | 12,936 | 12,936 | 41 | 3,779 | 10 | 7,072 | 1,669 | 402 | ..... | 12,973 | 37 | 12,936 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári | 2,754,677 | 12,256 | 26,747 | 39,003 | 13,803 | 2,293 | 2,999 | 2,628 | 7,741 | 10,541 | 12 | 40,017 | 1,014 | 39,003 |
| | | Other Government | 48,652 | .... | 28 | 28 | 3 | .... | 3 | .... | 20 | 2 | .... | 28 | .... | 28 |
| | | Alienated | 66,996 | 403 | 759 | 1,162 | 252 | 93 | 25 | 75 | 683 | 114 | .... | 1,242 | 80 | 1,162 |
| | | Total ... | 2,870,325 | 12,659 | 27,534 | 40,193 | 14,058 | 2,386 | 3,027 | 2,703 | 8,444 | 10,657 | 12 | 41,287 | 1,094 | 40,193 |
| 7 | Násik ... | Rayatwári | 1,822,159 | 29,309 | 38,899 | 68,208 | 25,005 | 3,998 | 13,595 | 8,331 | 10,551 | 13,219 | 704 | 75,403 | 7,195 | 68,208 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 102,234 | 2,681 | 2,792 | 5,473 | 1,636 | 306 | 885 | 830 | 1,093 | 1,045 | 16 | 5,811 | 338 | 5,473 |
| | | Total ... | 1,924,393 | 31,990 | 41,691 | 73,681 | 26,641 | 4,304 | 14,480 | 9,161 | 11,644 | 14,264 | 720 | 81,214 | 7,533 | 73,681 |
| 8 | Ahmadnagar.. | Rayatwári | 2,307,394 | 1,956 | 56,708 | 58,664 | 25,886 | 1,907 | 22,623 | 3,564 | 10,687 | 7,292 | 1,057 | 73,016 | 14,352 | 58,664 |
| | | Other Government | 153,764 | 12 | 3,816 | 3,828 | 1,342 | 110 | 1,882 | 119 | 752 | 287 | 7 | 4,499 | 671 | 3,828 |
| | | Alienated | 163,729 | 47 | 3,488 | 3,535 | 1,862 | 33 | 878 | 275 | 607 | 384 | 29 | 4,068 | 533 | 3,535 |
| | | Total ... | 2,624,887 | 2,015 | 64,012 | 66,027 | 29,090 | 2,050 | 25,383 | 3,958 | 12,046 | 7,963 | 1,093 | 81,583 | 15,556 | 66,027 |
| 9 | Poona ... | Rayatwári | 1,770,501 | 13,578 | 55,712 | 69,290 | 19,151 | 1,818 | 33,086 | 5,500 | 20,098 | 4,237 | 345 | 84,235 | 14,945 | 69,290 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 312,933 | 1,348 | 8,459 | 9,807 | 2,807 | 318 | 4,044 | 750 | 2,950 | 442 | 127 | 11,438 | 1,631 | 9,807 |
| | | Total ... | 2,083,443 | 14,926 | 64,171 | 79,097 | 21,958 | 2,136 | 37,130 | 6,250 | 23,048 | 4,679 | 472 | 95,673 | 16,576 | 79,097 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. .. | 1,957,739 | 3,818 | 70,582 | 74,400 | 32,635 | 3,764 | 30,943 | 2,522 | 12,570 | 14,559 | 230 | 97,223 | 22,823 | 74,400 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 85,003 | 37 | 3,379 | 3,416 | 1,802 | 289 | 1,717 | 96 | 379 | 595 | 61 | 4,939 | 1,523 | 3,416 |
| | | Total ... | 2,042,742 | 3,855 | 73,961 | 77,816 | 34,437 | 4,053 | 32,660 | 2,618 | 12,949 | 15,154 | 291 | 102,162 | 24,346 | 77,816 |
| [illegible] | Sátára ... | Rayatwári .. .. .. | 1,474,098 | 4,279 | 71,751 | 76,030 | 20,207 | 3,671 | 21,197 | 10,449 | 10,694 | 24,715 | 756 | 91,689 | 15,659 | 76,030 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 305,680 | 712 | 18,505 | 19,217 | 4,700 | 1,992 | 2,607 | 2,989 | 3,028 | 6,704 | 39 | 22,059 | 2,842 | 19,217 |
| | | Total ... | 1,779,778 | 4,991 | 90,256 | 95,247 | 24,907 | 5,663 | 23,804 | 13,438 | 13,722 | 31,419 | 795 | 113,748 | 18,501 | 95,247 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. .. | 1,396,868 | 2,598 | 27,242 | 29,840 | 1,846 | 8,382 | 6,279 | 6,573 | 7,174 | 2,337 | 99 | 32,690 | 2,850 | 29,840 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 323,736 | 1,372 | 6,667 | 8,039 | 736 | 259 | 1,726 | 2,129 | 2,366 | 1,059 | 24 | 8,299 | 260 | 8,039 |
| | | Total ... | 1,720,604 | 3,970 | 33,909 | 37,879 | 2,582 | 8,641 | 8,005 | 8,702 | 9,540 | 3,396 | 123 | 40,989 | 3,110 | 37,879 |
| 13 | Bijápur ... | Rayatwári .. .. .. | 2,334,678 | 51 | 10,631 | 10,682 | 2,369 | 1,695 | 941 | 1,176 | 3,690 | 1,983 | 53 | 11,907 | 1,225 | 10,682 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 271,806 | 3 | 1,382 | 1,385 | 338 | 96 | 151 | 106 | 567 | 232 | 8 | 1,498 | 113 | 1,385 |
| | | Total ... | 2,606,484 | 54 | 12,013 | 12,067 | 2,707 | 1,791 | 1,092 | 1,282 | 4,257 | 2,215 | 61 | 13,405 | 1,338 | 12,067 |
| 14 | Dhárwár ... | Rayatwári .. .. .. | 1,932,766 | 6,185 | 62,452 | 68,637 | 51 | 59,411 | 1,183 | 3,817 | 4,080 | 1,175 | 12 | 69,729 | 1,092 | 68,637 |
| | | Other Government .. .. | 332 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 107,170 | 444 | 7,101 | 7,545 | 1 | 6,820 | 10 | 321 | 416 | 47 | .... | 7,615 | 70 | 7,545 |
| | | Total ... | 2,040,268 | 6,629 | 69,553 | 76,182 | 52 | 66,231 | 1,193 | 4,138 | 4,496 | 1,222 | 12 | 77,344 | 1,162 | 76,182 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. .. | 513,831 | .... | 5,783 | 5,783 | .... | .... | 4 | 1,718 | 3,921 | 147 | 6 | 5,796 | 13 | 5,783 |
| | | Other Government .. .. | 1,065 | .... | 9 | 9 | .... | .... | .... | .... | 8 | 1 | .... | 9 | .... | 9 |
| | | Alienated .. .. .. | 8,106 | .... | 40 | 40 | .... | .... | .... | .... | 40 | .... | .... | 40 | .... | 40 |
| | | Total ... | 523,002 | ..... | 5,832 | 5,832 | ... | ... | 4 | 1,718 | 3,969 | 148 | 6 | 5,845 | 13 | 5,832 |
| 16 | Kolába ... | Rayatwári .. .. .. | 175,415 | No irrigation. | | | | | | | | | | | | |
| | | Other Government .. .. | 186,289 | | | | | | | | | | | | | |
| | | Alienated .. .. .. | 1,065 | | | | | | | | | | | | | |
| | | Total ... | 362,769 | | | | | | | | | | | | | |
| 17 | Ratnágiri ... | Rayatwári .. .. .. | 39,016 | | | | | | | | | | | | | |
| | | Other Government .. .. | 511,225 | | | | | | | | | | | | | |
| | | Alienated .. .. .. | 15,142 | | | | | | | | | | | | | |
| | | Total ... | 565,383 | | | | | | | | | | | | | |
| 18 | Kánara ... | Rayátwári .. .. .. | 213,370 | 4,514 | 64,724 | 69,238 | .... | 52,947 | 351 | 2,314 | 9,486 | 2,921 | 3,211 | 71,230 | 1,992 | 69,238 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 213,370 | 4,514 | 64,724 | 69,238 | ... | 52,947 | 351 | 2,314 | 9,486 | 2,921 | 3,211 | 71,230 | 1,992 | 69,238 |
| | Total A. ... | Rayatwári .. .. .. | 21,206,236 | 92,937 | 574,013 | 666,950 | 160,395 | 173,712 | 152,647 | 60,083 | 108,534 | 91,957 | 6,937 | 754,265 | 87,315 | 666,950 |
| | | Other Government .. .. | 1,746,745 | 149 | 27,224 | 27,373 | 5,564 | 2,281 | 5,164 | 1,892 | 2,663 | 10,993 | 487 | 29,047 | 1,674 | 27,373 |
| | | Alienated .. .. .. | 1,835,471 | 7,261 | 53,184 | 60,445 | 14,531 | 10,358 | 12,234 | 7,639 | 12,137 | 10.632 | 304 | 67,835 | 7,390 | 60,445 |
| | | Total ... | 24,788,452 | 100,347 | 654,421 | 754,768 | 180,490 | 186,351 | 170,045 | 69,614 | 123,337 | 113,582 | 7,728 | 851,147 | 96,379 | 754,768 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 230,943 | 174,959 | 42,706 | 217,665 | 34,530 | 91,084 | 72,582 | 475 | 3,069 | 28,418 | ... | 230,158 | 12,493 | 217,665 |
| 20 | Hyderabad ... ... ... ... | | 565,296 | 520,376 | 41,935 | 562,311 | 28,102 | 89,691 | 309,942 | 686 | 16,941 | 122,628 | ... | 567,990 | 5,679 | 562,311 |
| 21 | Shikárpur ... ... ... ... | | 633,181 | 503,530 | 129,652 | 633,182 | 119,794 | 263,946 | 271,720 | 757 | 16,414 | 54,674 | ... | 727,305 | 94,123 | 633,182 |
| 22 | Upper Sind Frontier ... ... ... | | 138,048 | 131,797 | 6,251 | 138,048 | 9,134 | 11,342 | 81,782 | 8 | 898 | 42,617 | ... | 145,781 | 7,733 | 138,048 |
| 23 | Thar and Párkar ... ... ... | | | Not available. | | | | | | | | | | | | |
| | | Total B. ... | 1,567,468 | 1,330,662 | 220,544 | 1,551,206 | 191,560 | 456,063 | 736,026 | 1,926 | 37,322 | 248,337 | ... | 1,671,234 | 120,028 | 1,551,206 |
| | | Grand Total ... | 26,355,920 | 1,431,009 | 874,965 | 2,305,974 | 372,050 | 642,414 | 906,071 | 71,540 | 160,659 | 361,919 | 7,728 | 2,522,381 | 216,407 | 2,305,974 |

# V.—Agricultural Stock, 1886-87.

| No. | District. | | Cattle and Other Quadrupeds. | | | | | | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Plough Cattle. | | Bulls for breeding purposes only. | | Oxen and He-buffaloes for other purposes. | | Milch Cattle. | | Young Stock. | | Total Cattle. | Horses and Ponies. | Sheep. | Goats. | Small. | Large, *i. e.* over two Bullocks. | For riding | For carrying loads. |
| | | | Oxen. | He-Buffaloes | Bulls. | Bull Buffaloes. | Oxen. | He-Buffaloes. | Cows. | She-Buffaloes. | Calves. | Buffaloe Calves. | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. | 81,824 | 65 | 626 | 319 | 3,201 | 584 | 45,943 | 59,169 | 24,459 | 27,620 | 243,810 | 3,244 | 23,220 | 14,547 | 39,676 | 58 | 858 | 13,098 |
| | | Other Government . | 56,111 | 18 | 445 | 154 | 808 | 418 | 37,295 | 28,252 | 14,125 | 9,980 | 147,606 | 2,704 | 23,036 | 16,199 | 25,355 | 118 | 201 | 8,427 |
| | | Alienated ... .. | 6,975 | ... | 21 | 17 | 57 | 1 | 4,019 | 3,688 | 621 | 1,557 | 16,956 | 323 | 2,900 | 2,188 | 2,943 | 114 | 40 | 1,157 |
| | | Total ... | 144,910 | 83 | 1,092 | 490 | 4,066 | 1,003 | 87,257 | 91,109 | 39,205 | 39,157 | 408,372 | 6,271 | 49,156 | 32,934 | 67,974 | 290 | 1,099 | 22,682 |
| 2 | Kaira ... ... | Rayatwári .. .. | 98,189 | 1 | 209 | 303 | 980 | 109 | 36,665 | 72,399 | 34,110 | 41,032 | 283,997 | 1,687 | 28,162 | 4,709 | 47,539 | .... | 633 | 19,093 |
| | | Other Government . | 25,104 | 3 | 33 | 105 | 203 | 19 | 2,205 | 34,977 | 4,147 | 17,176 | 83,972 | 318 | 6,048 | 735 | 13,485 | .... | 525 | 7,952 |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Total ... | 123,293 | 4 | 242 | 408 | 1,183 | 128 | 38,870 | 107,376 | 38,257 | 58,208 | 367,969 | 2,005 | 34,210 | 5,444 | 61,024 | ... | 1,158 | 27,045 |
| 3 | Panch Maháls ... | Rayatwári .. . | 56,098 | 15 | 471 | 355 | 1,785 | 131 | 45,185 | 15,715 | 41,004 | 8,217 | 168,974 | 2,013 | 2,321 | 19,029 | 28,057 | .... | 154 | 5,860 |
| | | Other Government . | 16,579 | 2 | 124 | 67 | 530 | 33 | 15,088 | 4,393 | 11,561 | 2,600 | 51,477 | 493 | 1,980 | 6,475 | 8,144 | .... | 40 | 1,797 |
| | | Alienated .. .. | 11,430 | 4 | 76 | 59 | 378 | 18 | 10,458 | 2,690 | 8,969 | 1,272 | 35,354 | 261 | 540 | 4,582 | 5,650 | .... | 63 | 1,277 |
| | | Total ... | 84,102 | 21 | 671 | 481 | 2,693 | 185 | 70,731 | 23,298 | 61,534 | 12,089 | 255,805 | 2,767 | 4,841 | 30,086 | 41,851 | ... | 257 | 8,934 |
| 4 | Broach ... ... | Rayatwári .. .. | 60,025 | 7 | 72 | 104 | 1,013 | 92 | 11,820 | 30,426 | 16,269 | 18,601 | 138,429 | 2,306 | 19,998 | 12,118 | 27,433 | .... | 2,919 | 16,160 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 1,329 | .... | 12 | 2 | 40 | .. | 229 | 623 | 272 | 512 | 3,019 | 43 | 372 | 28 | 626 | .... | 85 | 352 |
| | | Total ... | 61,354 | 7 | 84 | 106 | 1,053 | 92 | 12,049 | 31,049 | 16,541 | 19,113 | 141,448 | 2,349 | 20,370 | 12,146 | 28,059 | ... | 3,004 | 16,512 |
| 5 | Surat ... ... | Rayatwári .. .. | 103,286 | 4,560 | 314 | 275 | 7,959 | 271 | 63,028 | 42,704 | 73,299 | 32,445 | 323,141 | 1,000 | 61,734 | 27,986 | 49,566 | 970 | 7,689 | 27,973 |
| | | Other Government . | 808 | 64 | 1 | 1 | 65 | .. | 723 | 362 | 938 | 290 | 3,252 | 2 | 273 | 67 | 427 | 8 | 59 | 227 |
| | | Alienated .. .. | 843 | 20 | .. | .. | .... | .. | 488 | 311 | 89 | 90 | 1,841 | 6 | 88 | 10 | 307 | 3 | 58 | 215 |
| | | Total ... | 104,937 | 4,644 | 315 | 276 | 8,024 | 271 | 64,239 | 43,377 | 74,326 | 32,825 | 333,234 | 1,008 | 62,095 | 28,063 | 50,300 | 981 | 7,806 | 28,415 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. | 310,197 | 2,495 | 4,036 | 827 | 20,250 | 2,658 | 199,928 | 95,227 | 135,307 | 53,267 | 824,192 | 17,711 | 41,383 | 155,690 | 87,752 | 17,943 | 28,813 | 55,357 |
| | | Other Government . | 15,378 | 51 | 44 | 17 | 546 | 48 | 12,109 | 1,921 | 7,439 | 1,668 | 39,221 | 407 | 347 | 2,528 | 7,105 | 62 | 192 | 1,755 |
| | | Alienated .. .. | 9,319 | 54 | 56 | 35 | 459 | 165 | 6,014 | 2,624 | 4,034 | 1,619 | 24,379 | 597 | 2,304 | 4,420 | 1,937 | 892 | 679 | 1,260 |
| | | Total ... | 334,894 | 2,600 | 4,136 | 879 | 21,255 | 2,871 | 218,051 | 99,772 | 146,780 | 56,554 | 887,792 | 18,715 | 44,034 | 162,638 | 96,794 | 18,897 | 29,684 | 58,372 |
| 7 | Násik ... ... | Rayatwári .. .. | 191,463 | 23,448 | 1,216 | 333 | 10,618 | 517 | 164,679 | 27,557 | 93,258 | 14,341 | 527,430 | 13,300 | 123,029 | 111,473 | 44,582 | 23,110 | 9,868 | 18,160 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 12,346 | 1,493 | 42 | 42 | 806 | 58 | 7,916 | 1,495 | 3,965 | 768 | 28,931 | 693 | 6,410 | 5,403 | 2,539 | 1,893 | 704 | 1,199 |
| | | Total ... | 203,809 | 24,941 | 1,258 | 375 | 11,424 | 575 | 172,595 | 29,052 | 97,223 | 15,109 | 556,361 | 13,993 | 129,439 | 116,876 | 47,121 | 25,003 | 10,572 | 19,359 |
| 8 | Ahmadnagar ... | Rayatwári .. .. | 233,296 | 6,612 | 1,155 | 199 | 20,276 | 1,369 | 172,948 | 31,790 | 95,980 | 15,902 | 579,527 | 19,837 | 262,786 | 137,845 | 22,318 | 37,241 | 9,816 | 14,769 |
| | | Other Government . | 16,181 | 195 | 46 | 9 | 2,066 | 71 | 11,149 | 1,951 | 6,344 | 861 | 38,873 | 1,277 | 17,741 | 9,661 | 1,374 | 2,444 | 835 | 1,234 |
| | | Alienated .. .. | 15,315 | 45 | 104 | 4 | 606 | 126 | 9,494 | 1,498 | 4,927 | 746 | 32,865 | 1,356 | 16,962 | 8,099 | 2,155 | 2,529 | 576 | 938 |
| | | Total ... | 264,792 | 6,852 | 1,305 | 212 | 22,948 | 1,566 | 193,591 | 35,239 | 107,251 | 17,509 | 651,265 | 22,470 | 297,489 | 155,605 | 25,847 | 42,214 | 11,227 | 16,941 |
| 9 | Poona ... ... | Rayatwári .. .. | 215,965 | 8,742 | 570 | 157 | 6,965 | 1,055 | 125,577 | 35,738 | 69,627 | 17,776 | 482,172 | 10,197 | 230,497 | 70,298 | 22,762 | 24,031 | 1,414 | 16,855 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .. | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 43,673 | 469 | 115 | 16 | 870 | 134 | 22,183 | 5,625 | 10,734 | 2,761 | 86,580 | 1,853 | 23,946 | 10,111 | 2,438 | 4,906 | 159 | 4,313 |
| | | Total ... | 259,638 | 9,211 | 685 | 173 | 7,835 | 1 189 | 147,760 | 41,363 | 80,361 | 20,537 | 568,752 | 12,050 | 254,443 | 80,409 | 25,200 | 28,937 | 1,573 | 21,168 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. | 195,107 | 12,337 | 875 | 259 | 6,033 | 2,010 | 102,906 | 34,974 | 73,116 | 20,436 | 448,053 | 11,459 | 250,487 | 70,831 | .... | 19,999 | 705 | 11,333 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 7,474 | 616 | 97 | 6 | 143 | 50 | 4,613 | 1,273 | 3,159 | 761 | 18,192 | 501 | 17,204 | 3,791 | .... | 894 | 23 | 335 |
| | | Total ... | 202,581 | 12,953 | 972 | 265 | 6,176 | 2,060 | 107,519 | 36,247 | 76,275 | 21,197 | 466,245 | 11,960 | 267,691 | 74,622 | ..... | 20,893 | 728 | 11,668 |
| 11 | Sátára ... | Rayatwári .. .. | 184,587 | 19,228 | 611 | [illegible] | 5,206 | 996 | 113,379 | 62,545 | 72,001 | 34,997 | 493,749 | 12,555 | 306,700 | 70,313 | 18,954 | 19,943 | 978 | 17,144 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 42,526 | 5,043 | 131 | 36 | 1,156 | 163 | 25,238 | 14,568 | 16,597 | 8,103 | 113,561 | 2,086 | 50,802 | 15,812 | 6,047 | 4,360 | 171 | 3,792 |
| | | Total ... | 227,113 | 24,271 | 742 | 235 | 6,362 | 1,159 | 138,617 | 77,113 | 88,598 | 43,100 | 607,310 | 14,641 | 357,502 | 86,125 | 25,001 | 24,303 | 1,149 | 20,936 |
| | *III.—Bombay Karnátak.* | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. | 134,759 | 36,010 | 3,025 | 913 | 9,089 | 1,266 | 82,030 | 59,834 | 67,352 | 37,238 | 431,516 | 5,447 | 166,213 | 69,397 | 43,911 | 9,875 | 348 | 22,813 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .. | .... | .. | .... | .. | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 30,621 | 6,123 | 555 | 87 | 1,468 | 254 | 18,290 | 13,304 | 13,993 | 8,489 | 93,184 | 1,430 | 48,320 | 16,338 | 7,104 | 3,264 | 79 | 3,620 |
| | | Total ... | 165,380 | 42,133 | 3,580 | 1,000 | 10,557 | 1,520 | 100,320 | 73,138 | 81,345 | 45,727 | 524,700 | 6,877 | 214,533 | 85,735 | 51,015 | 13,139 | 427 | 26,433 |
| 13 | Bijápur ... | Rayatwári .. .. | 159,840 | 8,877 | 137 | 128 | 4,360 | 2,621 | 94,540 | 48,980 | 100,350 | 38,798 | 458,631 | 9,048 | 170,975 | 1,40,288 | 35,060 | 9,806 | 187 | 10,362 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .. | .... | .. | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 21,744 | 1,195 | 19 | 25 | 489 | 365 | 12,884 | 6,469 | 13,335 | 4,985 | 61,510 | 958 | 25148 | 21,212 | 5,666 | 1,052 | 23 | 1,083 |
| | | Total ... | 181,584 | 10,072 | 156 | 153 | 4,849 | 2,986 | 107,424 | 55,449 | 113,685 | 43,783 | 520,141 | 10,006 | 196,123 | 1,61,500 | 40,726 | 10,858 | 210 | 11,445 |
| 14 | Dhárwár ... | Rayatwári .. .. | 190,964 | 23,478 | 1,801 | 442 | 11,423 | 1,236 | 100,669 | 66,701 | 113,528 | 51,394 | 561,636 | 5,233 | 113,404 | 93,972 | 84,306 | 6,113 | 502 | 42,023 |
| | | Other Government.. | 25 | .... | .. | .. | .... | .. | 28 | 13 | 40 | 16 | 122 | .... | .... | 1 | 12 | .... | .. | 2 |
| | | Alienated .. .. | 14,387 | 3,034 | 188 | 36 | 775 | 50 | 8,990 | 4,803 | 9,761 | 3,463 | 45,487 | 396 | 4,526 | 5,870 | 6,857 | 243 | 15 | 2,755 |
| | | Total ... | 205,376 | 26,512 | 1,989 | 478 | 12,198 | 1,286 | 109,687 | 71,517 | 123,329 | 54,873 | 607,245 | 5,629 | 117,930 | 99,843 | 91,175 | 6,356 | 517 | 44,780 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. | 122,349 | 45,289 | 886 | 257 | 5,931 | 629 | 107,915 | 22,661 | 92,104 | 17,116 | 415,137 | 1,032 | 2,903 | 33,788 | 77,611 | .... | 3,850 | 21,838 |
| | | Other Government.. | 514 | 258 | 277 | 17 | .... | .. | 837 | 39 | 452 | 28 | 2,422 | 117 | 76 | 186 | 373 | .... | 2 | 41 |
| | | Alienated .. .. | 1,036 | 338 | .. | .. | 75 | 30 | 542 | 95 | 476 | 61 | 2,633 | 8 | 68 | 76 | 666 | .... | 18 | 249 |
| | | Total ... | 123,899 | 45,885 | 1,163 | 274 | 6,006 | 659 | 109,294 | 22,795 | 93,032 | 17,205 | 420,212 | 1,157 | 3,047 | 34,050 | 78,650 | ..... | 3,870 | 22.123 |
| 16 | Kolába ... | Rayatwári .. .. | 34,808 | 17,976 | 385 | 94 | 2,399 | 570 | 30,752 | 11,244 | 26,003 | 7,994 | 132,225 | 447 | 891 | 12,068 | 23,940 | .... | 938 | 3,933 |
| | | Other Government.. | 27,789 | 9,236 | 78 | 24 | 203 | 19 | 24,473 | 5,440 | 15,456 | 3,391 | 86,109 | 85 | 458 | 6,627 | 17,711 | .... | 71 | 418 |
| | | Alienated .. .. | 249 | 215 | .. | .. | 18 | 22 | 210 | 63 | 135 | 24 | 936 | 1 | 22 | 29 | 257 | .... | 7 | 8 |
| | | Total ... | 62,846 | 27,427 | 463 | 118 | 2,620 | 611 | 55,435 | 16,747 | 41,594 | 11,409 | 219,270 | 533 | 1,371 | 18,724 | 41,908 | ..... | 1,016 | 4,359 |
| 17 | Ratnágiri ... | Rayatwári .. .. | 12,339 | 3,066 | 17 | 6 | 2,657 | 600 | 7,730 | 3,246 | 4,817 | 1,619 | 36,097 | 61 | 410 | 2,845 | 8,581 | .... | 31 | 788 |
| | | Other Government.. | 60,098 | 12,296 | 20 | 3 | 420 | 251 | 45,999 | 12,256 | 16,864 | 4,609 | 152,816 | 64 | 604 | 9,502 | 35,659 | .... | 26 | 220 |
| | | Alienated .. .. | 1,584 | 410 | 3 | .. | 40 | 20 | 692 | 418 | 535 | 273 | 3,975 | 5 | 15 | 685 | 1,039 | .... | .. | 20 |
| | | Total ... | 74,021 | 15,772 | 40 | 9 | 3,117 | 871 | 54,421 | 15,920 | 22,216 | 6,501 | 192,888 | 130 | 1,029 | 13,032 | 45,309 | ..... | 57 | 1,028 |
| 18 | Kánara ... | Rayatwári .. .. | 69,650 | 25,294 | 5,248 | 1,001 | 5,162 | 1,495 | 70,441 | 22,632 | 43,021 | 9,000 | 252,944 | 412 | 2,367 | 2,882 | 41,843 | 1 | 72 | 5,196 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .. | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Total ... | 69,650 | 25,294 | 5,248 | 1,001 | 5,162 | 1,495 | 70,441 | 22,632 | 43,021 | 9,000 | 252,944 | 412 | 2,367 | 2,882 | 41,843 | 1 | 72 | 5,196 |
| | Total A. ... | Rayatwári .. .. | 2,454,741 | 237,500 | 21,654 | 6,171 | 125,307 | 18,212 | 1,576,135 | 743,542 | 1,175,605 | 447,793 | 6,806,660 | 116,989 | 1,807,480 | 1,050,079 | 703,891 | 1,69.090 | 69,775 | 322,755 |
| | | Other Government.. | 218,587 | 22,123 | 1,068 | 397 | 4,841 | 859 | 149,906 | 90,104 | 77,366 | 40,619 | 605,870 | 5,467 | 50,563 | 51,981 | 109,675 | 2,632 | 1,951 | 22,073 |
| | | Alienated .. .. | 220,851 | 19,059 | 1,419 | 365 | 7,380 | 1,406 | 132,260 | 59,547 | 91,602 | 35,484 | 569,423 | 10,517 | 199,627 | 98,654 | 46,231 | 20,150 | 2,700 | 22,573 |
| | | Grand Total ... | 2,894,179 | 278,682 | 24,141 | 6,933 | 137,528 | 20,527 | 1.858,301 | 893,193 | 1,344,573 | 523,896 | 7,981,953 | 132,973 | 2,057,670 | 1,200,714 | 859,797 | 191,872 | 74,426 | 367,401 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | Not available. | | | | | | | | | | | | | | | | | |
| 20 | Haidarabad... ... ... ... | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur ... ... ... ... | | | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier ... ... | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar ... ... ... | | | | | | | | | | | | | | | | | | | |

# VI.—Sources of Water-supply, 1886-87.

| Serial Number. | Name of District. | Wells, Bhudkis (Riverside Wells) and the like. | | | | | | | | Tanks. | | | | | | | | Other Sources. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | For Irrigation. | | For drinking supply of human beings, but not for irrigation. | | For cattle and washing and other purposes, but not for irrigation or drinking supply of human beings. | | In disuse. | | For Irrigation. | | For drinking supply of human beings solely. | | For cattle and washing and other purposes, but not for irrigation or drinking supply of human beings. | | In disuse. | | For Irrigation. | | For drinking supply of human beings solely. | | For cattle and washing and other purposes, but not for irrigation or drinking supply of human beings. | | In disuse. | |
| | | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Fallen in or in disrepair. | Other causes. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Fallen in or in disrepair. | Other causes. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| | **Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... .. | 10,407 | 3,141 | 1,882 | 53 | 486 | 62 | 846 | 156 | 10 | 877 | 30 | 806 | 22 | 2,248 | 9 | 92 | 52 | 152 | 8 | 47 | 6 | 160 | 11 | 15 |
| 2 | Kaira ... ... .. | 7,626 | 431 | 1,570 | 65 | 301 | 11 | 760 | 95 | 9 | 715 | 15 | 15 | 60 | 3,545 | 2 | 25 | 7 | ... | ... | ... | ... | ... | ... | ... |
| 3 | Panch Maháls... ... | 725 | 517 | 660 | 612 | 129 | 16 | 259 | 64 | ... | 2 | 12 | 48 | 10 | 679 | 25 | 32 | 2 | ... | ... | 119 | ... | 840 | 4 | 23 |
| 4 | Broach ... ... ... | 650 | 4 | 1,522 | 45 | 807 | 65 | 333 | 62 | ... | 78 | 6 | 84 | 29 | 1,664 | 14 | 12 | ... | ... | 1 | 9 | 1 | 64 | ... | 76 |
| 5 | Surat ... ... ... | 5,378 | 808 | 4,995 | 751 | 995 | 112 | 659 | 220 | 22 | 1,002 | 13 | 200 | 7 | 613 | 28 | 72 | 2 | 70 | ... | 109 | ... | 516 | 1 | 45 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | 14,053 | 1,801 | 19,737 | 1,454 | 1,118 | 78 | 2,311 | 1,151 | 3 | 8 | 8 | 4 | 24 | 86 | 4 | 19 | 91 | 52 | 3 | ... | 6 | 1 | 18 | 2 |
| 7 | Násik ... ... .... | 10,272 | 2,759 | 5 | 10 | 302 | 336 | 4,637 | 1,061 | 61 | 14 | 40 | 338 | 612 | 100 | 19 | 58 | 157 | 394 | 670 | 590 | 21 | 26 | 7 | 41 |
| 8 | Ahmednagar ... ... | 18,250 | 3,785 | 4,370 | 508 | 1,084 | 67 | 1,563 | 621 | 4 | 135 | 6 | 8 | 5 | 54 | 20 | 22 | 12 | 539 | 295 | 442 | 356 | 95 | 17 | 28 |
| 9 | Poona ... ... ... | 12,373 | 3,804 | 3,000 | 648 | 411 | 101 | 1,563 | 802 | 21 | 59 | 33 | 30 | 35 | 112 | 9 | 22 | 343 | 652 | 768 | 217 | 385 | 399 | 64 | 86 |
| 10 | Sholápur ... ... | 5,279 | 9,743 | 2,030 | 416 | 271 | 212 | 1,415 | 560 | 4 | 1 | 5 | 1 | 8 | 199 | ... | 19 | 1 | 64 | 207 | 17 | 10 | 114 | 3 | 8 |
| 11 | Sátára ... ... ... | 6,760 | 12,462 | 2,718 | 1,271 | 1,104 | 103 | 1,226 | 1,220 | 10 | 8 | 40 | 26 | 24 | 69 | 16 | 8 | 74 | 1,985 | 212 | 1,339 | 31 | 668 | 37 | 27 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... | 1,641 | 6,049 | 2,798 | 2,664 | 341 | 470 | 1,155 | ... | 6 | 223 | 32 | 146 | 27 | 1,073 | 52 | ... | ... | 204 | 499 | 385 | 9 | 859 | 32 | ... |
| 13 | Bijápur... ... ... | 815 | 2,972 | 1,122 | 1,260 | 297 | 431 | 729 | 269 | 2 | 2 | 26 | 91 | 27 | 199 | 12 | 11 | 2 | 27 | 1 | 86 | 9 | 43 | ... | 5 |
| 14 | Dhárwár ... ... | 1,430 | 2,574 | 2,532 | 2,045 | 1,307 | 1,828 | 1,163 | 1,061 | 363 | 1,947 | 311 | 734 | 282 | 2,612 | 96 | 80 | 21 | 66 | 191 | 124 | 48 | 232 | 4 | 54 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... .. | 1,525 | 2,362 | 4,109 | 2,920 | 144 | 176 | 109 | 220 | 1 | 14 | 17 | 58 | 44 | 954 | 37 | 94 | 3 | 2 | 28 | 198 | 12 | 533 | 2 | 48 |
| 16 | Kolába ... ... ... | 1,247 | 199 | 1,740 | 2,279 | 120 | 134 | 99 | 82 | ... | 1 | 14 | 125 | 20 | 477 | 35 | 119 | ... | 51 | 55 | 139 | 12 | 457 | 14 | 65 |
| 17 | Ratnágiri ... ... | 1,271 | 1,783 | 3,405 | 4,874 | 208 | 943 | 333 | 314 | 12 | 24 | 87 | 53 | 88 | 91 | 31 | 50 | 46 | 441 | 38 | 419 | 29 | 564 | 28 | 518 |
| 18 | Kánara... ... ... | 5,360 | 6,198 | 4,987 | 10,878 | 117 | 886 | 610 | 1,185 | 165 | 2,945 | 75 | 698 | 136 | 2,386 | 186 | 543 | 2 | 851 | 45 | 332 | 2 | 1,135 | 22 | 408 |
| | Total ... | 1,05,062 | 61,392 | 63,182 | 32,753 | 9,542 | 6,031 | 19,770 | 9,143 | 693 | 8,055 | 770 | 3,465 | 1,460 | 17,161 | 595 | 1,278 | 815 | 5,550 | 3,021 | 4,572 | 937 | 6,706 | 264 | 1,449 |

## ACCOMPANIMENT TO RETURN No. III.

*Number of Principal Fruit bearing trees, 1886-87.*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy Palm. | Date Palm. |
|---|---|---|---|---|---|---|---|
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 39,016 | 9,758 | ... | ... | 1 | 12 |
| 2 | Kaira ... ... ... | 167,463 | 18,448 | ... | 20 | 2 | ... |
| 3 | Panch Maháls ... ... | 31,328 | 4,019 | ... | ... | 128,424 | ... |
| 4 | Broach ... ... ... | 19,932 | 5,343 | ... | 4 | 6,357 | 351 |
| 5 | Surat ... ... ... | 167,391 | 70,845 | 3,384 | 6,027 | 59,089 | 775,545 |
| | Total ... | 425,130 | 108,413 | 3,384 | 6,051 | 193,873 | 775,908 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 115,894 | 9,170 | 329 | 171 | 32 | 1 |
| 7 | Násik ... ... ... | 163,034 | 6,081 | 20 | 205 | 14 | 46,231 |
| 8 | Ahmednagar ... ... | 59,480 | 10,601 | 3 | 8 | ... | 597 |
| 9 | Poona ... ... ... | 80,020 | 4,740 | 509 | 969 | 5,717 | 7,925 |
| 10 | Sholápur ... ... | 21,065 | 5,377 | ... | 12 | ... | 7,683 |
| 11 | Sátára ... ... ... | 165,872 | 10,130 | 7,534 | 1,367 | ... | 225 |
| | Total ... | 605,365 | 46,099 | 8,395 | 2,732 | 5,763 | 62,662 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 90,181 | 19,743 | 9,840 | 1,378 | ... | ... |
| 13 | Bijápur ... ... ... | 65,197 | 24,115 | 47 | 1,945 | 96 | 307,486 |
| 14 | Dhárwár ... ... | 159,715 | 48,421 | 7,327 | 50,708 | 13 | 396,733 |
| | Total ... | 315,093 | 92,279 | 17,214 | 54,031 | 109 | 704,219 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 112,340 | 8,955 | 1,773 | 76,630 | 55,810 | 13,067 |
| 16 | Kolába ... ... ... | 41,885 | 4,948 | 5,692 | 87,544 | 18,900 | 139 |
| 17 | Ratnágiri ... ... | 82,300 | 6,585 | 63,053 | 256,313 | ... | ... |
| 18 | Kánara ... ... ... | 79,875 | 7,247 | 57,417 | 704,332 | 3 | ... |
| | Total ... ... | 316,400 | 27,735 | 127,935 | 1,124,819 | 74,713 | 13,206 |
| | Grand Total ... | 1,661,988 | 274,526 | 156,928 | 1,187,633 | 274,458 | 1,555,995 |

# STATISTICS.

## B.—RAINFALL.

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | ...1st January—10th April. |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini ... ... | ...11th April—24th April. |
| | Bharani ... ... | ...25th April—8th May. |
| | Krittika ... ... | ...9th May—22nd May. |
| | Rohini ... ... | ...23rd May—4th June. |
| Monsoon-Kharíf— | | |
| 5th June to 14th August. | Mrig ... ... | ...5th June—19th June. |
| | Ardra ... ... | ...20th June—3rd July. |
| | Punarvasu ... | ...4th July—17th July. |
| | Pushya ... ... | ...18th July—31st July. |
| | Áshlesha ... ... | ...1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct. | Magha ... ... | ...15th August—27th August. |
| | Purva ... ... | ...28th August—10th Setpembe |
| | Uttara ... ... | ...11th Sept.—24th September. |
| | Hast ... ... | ...25th Sept.—7th October. |
| | Chitra ... ... | ...8th October—21st October. |
| Late-Rains— | | |
| 22nd Oct. to 30th Nov. ... | Sváti ... ... | ...22nd October—3rd November. |
| | Visháka ... ... | ...4th November—17th November. |
| | Anurádha... ... | ...18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1886, except for very few stations.

## Khándesh (South and Centre), 1886.

| Rain Periods. | Dhulia. | | Amalner. | | Pa'rola. | | Erandol. | | Pa'chora. | | Bhadgaon. | | Cha'lisgaon. | | Bhusa'val. | | Edala'ba'd. | | Jalgaon. | | Ja'mner. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon.. | 1·95 | 2 | .. | .. | 2·73 | 2 | 1·13 | 6 | 0·24 | 3 | 2·51 | 5 | 1·99 | 5 | 3·60 | 4 | 2·00 | 3 | 0·58 | 3 | 0·71 | 2 |
| Monsoon-Kharif. | 17·07 | 35 | 14·29 | 35 | 25·30 | 40 | 24·22 | 39 | 21·25 | 42 | 17·62 | 42 | 16·03 | 30 | 19·94 | 36 | 18·88 | 26 | 22·59 | 44 | 24·49 | 41 |
| Monsoon-Rabi . | 11·95 | 23 | 8·77 | 19 | 7·88 | 25 | 7·72 | 22 | 10·0 | 22 | 9·38 | 20 | 17·05 | 26 | 5·79 | 22 | 12·35 | 23 | 10·48 | 31 | 9·94 | 26 |
| Late Rains .. | 2·40 | 6 | 2·05 | 4 | 3·65 | 5 | 3·06 | 6 | 4·04 | 5 | 2·24 | 5 | 4·38 | 5 | 6·42 | 5 | 2·10 | 5 | 4·97 | 5 | 3·67 | 5 |
| Total .. | 33·37 | 66 | 25·11 | 58 | 39·56 | 72 | 36·13 | 73 | 35·53 | 72 | 31·75 | 72 | 39·45 | 66 | 35·75 | 67 | 35·33 | 57 | 38·62 | 83 | 38·81 | 74 |
| Average .. | 25·79 | .. | 28·05 | .. | 32·08 | .. | 31·12 | .. | 29·51 | .. | 31·29 | .. | 29·70 | .. | 35·18 | .. | 28·78 | .. | 33·42 | .. | 34·84 | .. |

*General characteristics.*—Plain country, S.-W. Monsoon occasionally scanty and uncertain. This is the principal cotton tract. Other crops wheat and oil-seeds.

*Remarks.*—Ante-monsoon showers are not frequent in Khándesh. South-west monsoon broke early in June in Rohini, being earlier than in further north and west. Sowing rain very seasonable for cotton, the chief staple. A'rdra rain of 24th June excessively heavy, from 3 to 5 inches in places. Cotton sowing completed by end of June. July rain excessive and injuriously continuous, especially to cotton, preventing hoeing and weeding. The break at end of July saved cotton. In August both the break of A'shlesha and the heavy fall of Magha were favourable. The rain of Purva and Uttara in September very deficient and the break injuriously long (5th-29th) for all crops—bájri, jowári and cotton. Hast rain which came on 30th September was of inestimable value and sufficient for all wants. Hence the Sváti fall untimely and injuriously heavy for bájri which was ripe and in places cut and for cotton which was ready for picking. Late rains were, however, favourable for sowing of wheat, gram and linseed. The outturn of these crops was considerably affected by excessive cold and high easterly winds. The season, both kharif and rabi, was on the whole much better than for several years past.

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## Khándesh (West and North), 1886.

| Rain Periods. | Pimpalner. | | Niza'mpur. | | Nandurba'r. | | Taloda. | | Sha'ha'da. | | Sindkhed. | | Chopda. | | Shirpur. | | Sa'vda. | | Ya'val. | | Ra'ver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon.. | 2·26 | 5 | 0·48 | 3 | 3·13 | 3 | 0·85 | 3 | 0·15 | 1 | 0·73 | 2 | 0·60 | 5 | 0·48 | 6 | 0·27 | 3 | 0·62 | 3 | 0·54 | 3 |
| Monsoon-Kharif. | 11·47 | 41 | 12·22 | 39 | 20·94 | 41 | 16·46 | 42 | 17·04 | 40 | 15·30 | 32 | 16·73 | 43 | 18·90 | 52 | 19·79 | 37 | 18·26 | 34 | 24·32 | 37 |
| Monsoon-Rabi.. | 13·24 | 32 | 6·42 | 18 | 10·48 | 21 | 10·82 | 23 | 11·73 | 20 | 6·20 | 12 | 11·21 | 26 | 12·85 | 25 | 7·26 | 19 | 9·75 | 21 | 6·24 | 25 |
| Late Rains .. | 0·89 | 5 | 1·38 | 4 | 1·05 | 1 | 0·27 | 2 | .. | .. | 0·15 | 1 | 1·31 | 5 | 0·51 | 5 | 2·88 | 5 | 4·81 | 4 | 3·52 | 6 |
| Total .. | 27·86 | 83 | 20·50 | 64 | 35·60 | 66 | 28·40 | 70 | 28·92 | 61 | 22·38 | 47 | 29·85 | 79 | 32·74 | 88 | 30·20 | 64 | 33·44 | 62 | 34·62 | 71 |
| Average .. | 27·42 | .. | 23·50 | .. | 32·67 | .. | 34·96 | .. | 31·56 | .. | 22·95 | .. | 31·58 | .. | 27·56 | .. | 28·95 | .. | 34·44 | .. | 33·56 | .. |

*General characteristics.*—Heavy and sure rainfall near Western Ghâts and Sátpudás. Crops,—wheat and other cereals and some cotton and oil-seeds.

*Remarks.*—Monsoon broke well and generally with the Mrig in 2nd week of June, being a little later than in the south and centre. Sowing rain highly seasonable for jowári, bájri and tili, as also for cotton, though not so important a crop here. July rain though heavy as in south and centre was beneficial, partly because the June rain had been lighter and partly because of the nature of the crops. August rain was seasonable, except in Nizámpur Petha, where deficient. The injurious break of September was here relieved by occasional light showers and injury not so great as in south and centre. Full relief came early in October with Hast, and the Sváti rain, though injurious to standing crops, was more favourable to rabi wheat and gram which are largely raised. The injurious December rain was here absent except in Chopda and Sávda. Rabi outturn affected by excessive cold and easterly high breeze. Season on the whole good both for kharif and rabi.

## Násik, 1886.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Niphad. | | Yeola. | | Nándgaon. | | Ma'legaon | | Sata'na. | | Kalvan. | | Cha'ndor. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ... |
| Ante-Monsoon .. | 2·68 | 4 | 4·11 | 7 | 3·80 | 4 | 1·18 | 4 | 0·29 | 2 | 0·87 | 4 | 1·05 | 2 | 2·37 | 5 | 0·95 | 3 | 2·90 | 3 | 1·15 | 3 | 2·55 | 4 |
| Monsoon-Kharif .. | 20·56 | 54 | 82·96 | 68 | 15·65 | 48 | 12·10 | 32 | 13·43 | 35 | 27·41 | 39 | 14·05 | 31 | 16·18 | 27 | 16·50 | 35 | 19·51 | 37 | 17·02 | 39 | 51·21 | 59 |
| Monsoon-Rabi .. | 13·15 | 43 | 42·35 | 61 | 15·75 | 37 | 10·15 | 23 | 11·37 | 19 | 15·79 | 34 | 12·18 | 21 | 10·34 | 20 | 9·30 | 26 | 8·26 | 24 | 14·43 | 31 | 37·46 | 37 |
| Late Rains .. | 0·89 | 5 | 1·85 | 9 | 0·86 | 5 | 0·83 | 5 | 2·26 | 7 | 3·08 | 3 | 0·34 | 4 | 2·16 | 3 | 1·30 | 5 | 1·99 | 2 | 0·47 | 2 | 0·90 | 4 |
| Total .. | 37·28 | 106 | 131·27 | 145 | 36·06 | 94 | 24·26 | 64 | 27·34 | 63 | 47·15 | 80 | 27·62 | 58 | 31·05 | 55 | 28·05 | 69 | 32·66 | 66 | 33·07 | 75 | 92·12 | 104 |
| Average .. | 33·74 | .. | 130·08 | .. | 27·21 | .. | 22·68 | .. | 21·88 | .. | 28·13 | .. | 25·36 | .. | 24·11 | .. | 34·82 | .. | 29·48 | .. | 32·43 | .. | 92·36 | .. |

*General characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—Rainfall up to average everywhere except Kalvan, above in the east. Fall greater throughout, especially in Nándgaon than in 1885. Ante-monsoon showers abundant. The regular rains began in the 3rd week in June at the close of the Mrig period, though earlier in parts. These deficient for early sowing, but good sowing rain for rice and nágli came in July, rather heavy in some places, retarding bájri sowing and preventing cotton weeding. Bájri sowings completed by about the middle and planting out of rice, nágli and varai by the end of August. September rain deficient and break too prolonged. Good rain came with Hast in October, but it was too heavy and continuous till the end of Chitra (8th-21st October), and was greatly injurious to bájri and to certain extent to cotton. On the whole kharif season fairly favourable and outturn estimated at 10—14 annas. Rabi crops were good though wheat and linseed were affected by blight and excessive cold. Linseed failed as elsewhere in the Deccan. Fodder plentiful.

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## Ahmadnagar, 1886.

| Rain Periods. | 1 Nagar. | | 2 Pa'rner. | | 3 Shrigonda. | | 4 Karjat. | | 5 Ja'mkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Rahuri. | | 9 Kopargaon. | | 10 Sangamner. | | 11 Akola | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | [illegible] |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Ante-Monsoon ... | 2·21 | 6 | 1·05 | 5 | 1·31 | 6 | 1·38 | 6 | 3·54 | 10 | 1·38 | 7 | 0·88 | 4 | 1·68 | 5 | 0·15 | 1 | 0·36 | 4 | 1·63 | |
| Monsoon-Kharif .. | 14·79 | 37 | 12·24 | 29 | 10·38 | 27 | 13·27 | 26 | 16·62 | 35 | 16·21 | 40 | 20·25 | 27 | 13·23 | 30 | 10·03 | 19 | 14·34 | 35 | 13·53 | 3 |
| Monsoon-Rabi .. | 16·42 | 36 | 10·09 | 19 | 11·08 | 21 | 15·43 | 29 | 14·31 | 27 | 14·75 | 28 | 10·90 | 19 | 18·77 | 23 | 7·38 | 16 | 7·77 | 34 | 7·92 | 2 |
| Late Rains .. | 10·06 | 12 | 5·97 | 8 | 9·71 | 9 | 6·05 | 10 | 6·02 | 10 | 9·61 | 11 | 8·07 | 7 | 3·60 | 8 | 3·65 | 8 | 2·68 | 8 | 1·35 | |
| Total ... | 43·48 | 91 | 29·35 | 61 | 32·48 | 63 | 36·13 | 71 | 40·49 | 82 | 41·95 | 86 | 40·10 | 57 | 37·28 | 66 | 21·21 | 44 | 25·15 | 81 | 24·43 | 6 |
| Average ... | 25·11 | .. | 23·16 | .. | 21·52 | .. | 25·38 | .. | 28·95 | .. | 26·94 | .. | 25·42 | .. | 22·86 | .. | 18·41 | .. | 20·86 | .. | 23·00 | . |

*General characteristics.*—*(1) Desh*—Godáveri valley (tálukás 6 to 9). Rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukás 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukás 1, 2, 5 and 10 lie between these valleys. Alternation of bare hill and treeless plain, with occasional fertile well-wooded tracts. Rain more regular. *(2) Dángs*—Half Akola has very heavy rain. Half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Fall greatly above average in the east and south and above average elsewhere except in Akola. In short, a season of excessive rain. The monsoon broke with the Mrig (5th-19th June). Sowing rain came with A'rdra (20th June to 3rd July). The rainfall of Pushya (18th-31st July) was very favourable, specially in Akola and Shrigonda, where previous fall was deficient. Ashlesha (1st-14th August) rain heavy in places, washing out recently sown bájri seed in Nagar, Jámkhed and Karjat. September rain light but break not injuriously long, being relieved by occasional showers. Hast rain was seasonable and useful for sowing rabi and also to fill kharif crops. But the rain of Chitra and Sváti injuriously excessive to bájri, cotton and reaped rice, though favourable to rabi. December rain altogether abnormal (7 inches within 12 hours at Nagar on 11th), carrying away sheep and grain on river sides. Excessive moisture and subsequent cloudy weather induced blight on wheat and gram which suffered to some extent, while linseed totally failed. Kharif outturn estimated at 9 annas and rabi at 11 annas.

## Poona, 1886.

| Rain Periods. | Poona. | | Paud. | | Khadkála. | | Lonávli. | | Khed. | | Ghoda. | | Junnar. | | Siru'r. | | Sásvad. | | Supa. | | Bárámati. | | Indápur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 4·02 | 12 | 4·94 | 10 | 2·08 | 10 | 5·90 | 10 | 1·62 | 9 | 1·68 | 5 | 0·33 | 3 | 1·91 | 5 | 2·71 | 10 | 2·60 | 4 | 4·96 | 13 | 1·41 | 10 |
| Monsoon-Kharif .. | 14·27 | 40 | 37·79 | 56 | 38·31 | 60 | 104·37 | 63 | 9·21 | 43 | 13·10 | 38 | 16·03 | 42 | 9·31 | 31 | 8·48 | 39 | 11·41 | 21 | 6·46 | 25 | 11·43 | 36 |
| Monsoon-Rabi .. | 13·14 | 36 | 20·07 | 43 | 22·16 | 47 | 42·20 | 46 | 13·87 | 42 | 14·96 | 34 | 12·34 | 34 | 17·02 | 27 | 9·47 | 31 | 11·94 | 17 | 13·21 | 30 | 13·51 | 24 |
| Late Rains .. | 4·11 | 11 | 5·59 | 11 | 3·84 | 10 | 2·84 | 6 | 4·09 | 9 | 3·70 | 8 | 0·90 | 5 | 5·63 | 12 | 3·44 | 12 | 5·74 | 7 | 7·19 | 11 | 5·25 | 11 |
| Total .. | 35·54 | 99 | 68·39 | 120 | 66·39 | 127 | 155·31 | 125 | 28·79 | 103 | 33·44 | 85 | 29·60 | 84 | 33·87 | 75 | 24·10 | 92 | 31·69 | 49 | 31·82 | 79 | 31·60 | 81 |
| Average .. | 31·06 | .. | 60·16 | .. | 64·93 | .. | 158·04 | .. | 24·66 | .. | 30·14 | .. | 28·67 | .. | 21·73 | .. | 23·25 | .. | 29·32 | .. | 22·72 | .. | 24·78 | .. |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli, and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukás are uncertain and irregular like the adjoining tálukás of Sholápur.

*Remarks.*—Fall much above average in the eastern tálukás. Elsewhere abundant. The ante-monsoon showers were favourable for preparing land except in north. Regular monsoon set in with Mrig (5th June). Mrig rain though sufficient for sowing in western rice tracts, was less favourable in northern kharif talukás. The fall of Pushya (18th-31st July) was throughout good, particularly in the kharif tálukás and rice tracts. Kharif rain less favourable in eastern rabi tálukás, where it is less important. Rain of Purva and Uttara in September was deficient except in east and much anxiety was felt. Break very favourably relieved by Hast rain in October. But the Chitra and Sváti rain was excessive, injuring ripe rice in west and bájri in the plains. Injury, however, not great and outturn estimated at 10—12 annas. Rabi crops were excellent and would have given a full yield, but for the blight which appeared on wheat and gram after the fall in December.

## Sholápur, 1886.

| Rain Periods. | Sholápur. | | Bársi. | | Mádha. | | Karmála. | | Pandharpur. | | Sángola. | | Málsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | ... | ... | 0·15 | 1 | 0·03 | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon... | 1·35 | 9 | 4·47 | 12 | 1·74 | 8 | 2·91 | 14 | 2·61 | 12 | 2·06 | 8 | 1·85 | 6 |
| Monsoon-Kharif | 11·34 | 32 | 15·90 | 39 | 18·98 | 27 | 12·63 | 44 | 16·60 | 28 | 5·81 | 21 | 6·28 | 17 |
| Monsoon-Rabi . | 14·36 | 30 | 17·68 | 31 | 17·22 | 24 | 16·21 | 37 | 17·09 | 19 | 12·60 | 20 | 14·24 | 15 |
| Late Rains ... | 9·82 | 11 | 8·66 | 12 | 2·61 | 5 | 4·01 | 12 | 2·45 | 7 | 2·80 | 12 | 2·89 | 5 |
| Total ... | 36·87 | 82 | 46·86 | 95 | 40·58 | 65 | 35·76 | 107 | 38·75 | 66 | 23·27 | 61 | 25·26 | 43 |
| Average ... | 33·33 | ... | 32·35 | ... | 27·89 | ... | 26·32 | ... | 27·65 | ... | 22·99 | ... | 21·07 | ... |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Preparatory showers highly favourable and sowings began with Mrig throughout the district and timely completed except in Málsiras and Sángola, where kharif rain was deficient. In Pandharpur season's rainfall was particularly favourable throughout. Monsoon rabi opened with a good heavy fall of Magha, and Uttara rain in September was also fairly good unlike elsewhere in the Deccan. Rabi rain favourable throughout, particularly in Málsiras and Sángola, where it was most needed. Hast rain favourable, but Sváti rain injurious to cotton and bájri. December rain unnecessary and harmful to cotton. Wheat and gram partially affected by blight and linseed (sown extensively) generally failed. On the whole, the year's rainfall was good, seasonable, and above the average throughout; both kharíf and rabi crops were generally sown under favourable circumstances and the outturn of both estimated at 8—10 annas.

## Sátára, 1886.

| Rain Periods. | Sa'ta'ra. | | Koregaon. | | Wa'i. | | Khanda'la | | Medha. | | Malcolm-peth. | | Pa'tan. | | Kara'd. | | Peth. | | Shira'la. | | Dahiva'di. | | Vaduj. | | Vita. | | Ta'sgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | 0·08 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·02 | 1 | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 3·38 | 15 | 2·43 | 10 | 3·41 | 9 | 1·79 | 5 | 0·57 | 4 | 8·73 | 17 | 2·55 | 12 | 4·76 | 10 | 4·43 | 12 | 4·24 | 13 | 3·15 | 11 | 2·33 | 8 | 2·82 | 11 | 3·91 | 12 |
| Monsoon-Kharif ... | 18·32 | 47 | 12·51 | 35 | 16·49 | 49 | 8·42 | 23 | 37·93 | 49 | 171·63 | 67 | 46·49 | 49 | 20·84 | 47 | 12·27 | 36 | 23·79 | 46 | 8·10 | 32 | 12·14 | 31 | 11·16 | 32 | 13·65 | 20 |
| Monsoon-Rabi ... | 11·28 | 36 | 8·65 | 19 | 11·83 | 30 | 10·65 | 18 | 14·53 | 34 | 78·12 | 52 | 14·75 | 33 | 9·47 | 35 | 7·81 | 33 | 14·15 | 31 | 11·35 | 23 | 11·69 | 26 | 13·56 | 24 | 10·29 | 33 |
| Late Rains ... ... | 5·04 | 14 | 4·54 | 10 | 5·33 | 16 | 3·93 | 10 | 5·04 | 11 | 4·68 | 13 | 5·94 | 7 | 3·29 | 12 | 5·65 | 13 | 2·18 | 8 | 5·85 | 12 | 4·33 | 9 | 6·73 | 9 | 3·06 | 8 |
| Total ... | 38·02 | 112 | 28·21 | 75 | 37·06 | 104 | 24·79 | 56 | 58·07 | 98 | 263·16 | 149 | 69·73 | 101 | 38·36 | 104 | 30·16 | 94 | 44·36 | 98 | 28·47 | 79 | 30·49 | 74 | 34·27 | 76 | 30·91 | 73 |
| Average ... | 40·84 | ... | 27·68 | ... | 32·47 | ... | 21·45 | ... | 70·49 | ... | 268·08 | ... | 67·85 | ... | 31·64 | ... | 29·43 | ... | 37·88 | ... | 20·51 | ... | 21·85 | ... | 24·71 | ... | 28·49 | ... |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—The ante-monsoon showers, though favourable, were not so copious as last year. But the monsoon rain came early in Mrig and was exceptionally seasonable and well distributed in quality as well as quantity. Kharif sowings timely completed. Magha rain was very fine for standing kharif except in the Khandála Petha of Wái, where the rain all along was insufficient. Purva and Uttara rain in September badly deficient and much anxiety was felt. But Hast rain in October came opportunely. Late rains of Sváti and December were slightly injurious to standing crops. Pulses suffered in places from aphides and wheat and gram from blight. On the whole the season was good for both kharif and rabi and the outturn estimated at 10—12 annas.

## Belgaum, 1886.

| Rain Periods. | Belgaum. | | Cha'ndgad | | Kha'na'-pur. | | Sampgaon. | | Saundatti. | | Murgod. | | Goka'k. | | Chikodi. | | Hukeri. | | Athni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·02 | 1 | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 6·40 | 22 | 6·54 | 18 | 6·31 | 11 | 5·34 | 12 | 3·61 | 17 | 4·12 | 14 | 3·49 | 20 | 4·76 | 13 | 2·64 | 10 | 2·76 | 15 |
| Monsoon-Kharif ... | 23·59 | 53 | 57·65 | 52 | 34·60 | 40 | 9·85 | 43 | 12·16 | 45 | 7·96 | 32 | 8·69 | 37 | 11·40 | 39 | 7·94 | 22 | 9·99 | 34 |
| Monsoon-Rabi ... ... | 6·60 | 36 | 24·25 | 43 | 10·54 | 31 | 6·10 | 28 | 8·54 | 26 | 9·59 | 24 | 10·70 | 27 | 10·61 | 38 | 8·56 | 19 | 16·16 | 32 |
| Late Rains ... ... | 3·82 | 10 | 5·11 | 11 | 2·51 | 4 | 5·26 | 10 | 4·31 | 10 | 552 | 6 | 8·14 | 10 | 3·82 | 11 | 4·48 | 5 | 3·53 | 13 |
| Total ... | 40·41 | 121 | 93·55 | 124 | 53·96 | 86 | 26·55 | 93 | 28·62 | 98 | 27·19 | 76 | 31·02 | 94 | 30·61 | 102 | 23·62 | 56 | 32·44 | 94 |
| Average ... | 46·80 | ... | 95·98 | ... | 64·68 | ... | 28·14 | ... | 24·47 | ... | 24·40 | ... | 23·79 | ... | 27·65 | ... | 21·60 | ... | 24·42 | ... |

*General characteristics.*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—The ante-monsoon showers were exceedingly favourable throughout, especially in Belgaum and Khánápur, for preparation of the soil and for sowing rice. South-west monsoon set in with Mrig (5th-19th June) and sowings completed on light lands by the end of June. But subsequent rain particularly deficient for rice in south and west. Rabi rain favourable especially in Athni, where cotton was early sown. Heavy rain came with Chitra in October, which, though very favourable for rabi, was too late to benefit rice which gave a poor yield. Other kharif crops were fairly good. The rabi crops were in the ground by the end of October: Sváti rain, beneficial to sown rabi, was not heavy and did very little harm to reaped bájri. In the beginning grasshoppers did some injury to young kharif crops, but they disappeared by the end of July. Kharif outturn estimated at 7—9 annas. Rabi crops also were good except linseed which suffered from blight as elsewhere.

## Bijápur, 1886.

| Rain Periods. | Bijápur. | | Indi. | | Sindgi. | | Bágevádi. | | Muddebihál. | | Bágalkot. | | Bilgi. | | Bádámi. | | Hungund. | | Ilkal. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | 1·92 | 1 | .. | .. | 0·20 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. | 2·99 | 15 | 2·04 | 13 | 3·24 | 14 | 3·22 | 7 | 2·92 | 12 | 3·98 | 16 | 5·37 | 8 | 9·41 | 8 | 3·66 | 12 | 1·86 | 14 |
| Monsoon-Kharif .. | 8·20 | 41 | 7·07 | 33 | 13·29 | 36 | 10·88 | 30 | 8·49 | 29 | 10·97 | 38 | 7·36 | 23 | 13·68 | 21 | 9·27 | 22 | 8·44 | 34 |
| Monsoon-Rabi .. .. | 16·43 | 37 | 12·58 | 28 | 16·86 | 28 | 12·36 | 30 | 12·51 | 24 | 12·96 | 31 | 12·28 | 18 | 12·78 | 19 | 13·76 | 24 | 13·61 | 39 |
| Late Rains .. .. | 3·64 | 9 | 3·63 | 10 | 1·29 | 8 | 3·31 | 6 | 1·73 | 6 | 6·59 | 9 | 2·60 | 6 | 1·62 | 6 | 1·31 | 5 | 2·18 | 9 |
| Total .. | 31·26 | 102 | 25·32 | 84 | 36·60 | 87 | 29·77 | 73 | 25·85 | 73 | 34·50 | 94 | 27·61 | 55 | 37·49 | 54 | 28·00 | 63 | 26·09 | 96 |
| Average .. | 26·79 | .. | 25·73 | .. | 25·71 | .. | 25·02 | .. | 23·46 | .. | 24·07 | .. | 22·93 | .. | 25·51 | .. | 25·82 | .. | 22·10 | .. |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkoṭ and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukás of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Preparatory showers heavy and favourable. Monsoon broke early with Mrig and sowings began everywhere but the rainfall in July very deficient and late-sown crops damaged in places by grasshoppers. Crops eagerly looked for rain which came well in Ashlesha (1st-14th August). The rabi rain began and continued favourably everywhere, and cotton was sown early. The Chitra fall in October, though heavy, was generally favourable. Sváti rain as also that of December light and not injurious. On the whole, kharif season fairly good, and rabi excellent except that exotic cotton, wheat and gram were partially blighted and linseed turned out a bad crop. Kharif outturn estimated at 10 and rabi at 10—12 annas.

## Dhárwár, 1886.

| Rain Periods. | Dhárwár. | | Mugud. | | Hubli. | | Kalghatgi. | | Bankápur. | | Hángal. | | Kod. | | Ránebennur. | | Kárajgi. | | Gadag. | | Mundargi. | | Navalgund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | 0·03 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 5·85 | 16 | 7·34 | 15 | 5·06 | 18 | 8·12 | 20 | 3·92 | 10 | 6·51 | 11 | 5·48 | 11 | 3·77 | 9 | 4·45 | 6 | 7·05 | 15 | 6·23 | 13 | 10·35 | 10 | 9·04 | 11 | 2·92 | 7 |
| Monsoon-Kharif .. | 10·24 | 38 | 14·07 | 43 | 5·57 | 38 | 12·12 | 34 | 8·54 | 32 | 17·85 | 38 | 10·09 | 34 | 4·33 | 25 | 7·86 | 30 | 9·28 | 31 | 6·25 | 13 | 13·78 | 24 | 6·85 | 16 | 11·09 | 29 |
| Monsoon-Rabi .. | 9·43 | 32 | 10·55 | 30 | 10·96 | 34 | 10·10 | 29 | 7·72 | 22 | 6·43 | 26 | 6·22 | 25 | 5·50 | 14 | 9·79 | 20 | 10·26 | 25 | 6·23 | 15 | 7·08 | 19 | 14·00 | 16 | 14·68 | 26 |
| Late Rains .. .. | 5·87 | 9 | 4·41 | 8 | 2·27 | 12 | 3·27 | 5 | 6·21 | 7 | 3·45 | 5 | 2·63 | 8 | 2·60 | 5 | 2·00 | 5 | 2·34 | 5 | 0·80 | 4 | 1·37 | 4 | 2·17 | 4 | 1·25 | 5 |
| Total .. | 31·39 | 95 | 36·40 | 97 | 23·86 | 102 | 33·61 | 88 | 26·39 | 71 | 34·24 | 80 | 24·42 | 78 | 16·20 | 53 | 24·10 | 61 | 28·93 | 76 | 19·51 | 45 | 32·58 | 57 | 32·06 | 47 | 29·94 | 67 |
| Average .. | 32·95 | .. | 34·34 | .. | 27·03 | .. | 30·14 | .. | 28·29 | .. | 37·34 | .. | 27·70 | .. | 23·82 | .. | 27·21 | .. | 25·98 | .. | 17·51 | .. | 25·36 | .. | 23·56 | .. | 25·77 | .. |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur tálukás are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: "Good rain won't give a big crop, nor will bad rain bring famine." This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Ante-monsoon rain was very favourable for sowing rice in the malád. It was unnecessarily heavy in Navalgund (10·35 inches) for crops though invaluable for water-supply. Regular monsoon broke with Mrig except in west and south-west where it was a little later. Sowings began well, but subsequent kharif rain in July and August badly deficient, particularly for rice in the malád. Again, the rabi rain in September, though highly favourable in north-east was insufficient for rice in south-west. In places rice was replaced by jowári. Cotton sowings were begun and completed early. The desired relief in the malád came with Sváti in latter half of October, but was too late to improve rice which turned out a poor crop. Other kharif crops were fairly good. Rabi crops good except that wheat and exotic cotton were slightly affected by blight. Rabi outturn estimated at 8—10 annas.

## Kánara, 1886.

| Rain Periods. | Kárwár. | | Ankola. | | Kumta. | | Honávar. | | Bhatkal. | | Haliyál. | | Supa. | | Yellápur. | | Mundgod. | | Sirsi. | | Siddápur | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1·08 | 1 | 0·18 | 1 | .. | .. | 0·34 | 1 | 0·19 | 1 | ... | .. |
| Ante-Monsoon .. | 11·42 | 17 | 16·30 | 16 | 13·21 | 15 | 10·11 | 10 | 5·29 | 10 | 9·31 | 14 | 5·76 | 19 | 4·30 | 14 | 6·39 | 19 | 6·53 | 22 | 6·25 | 17 |
| Monsoon-Kharif .. | 103·56 | 65 | 92·24 | 62 | 107·94 | 63 | 100·95 | 62 | 105·43 | 69 | 19·39 | 49 | 56·87 | 65 | 53·39 | 59 | 18·88 | 50 | 51·31 | 62 | 63·75 | 64 |
| Monsoon-Rabi .. | 27·58 | 52 | 26·33 | 39 | 25·82 | 42 | 25·84 | 40 | 27·29 | 50 | 7·75 | 38 | 18·59 | 44 | 15·97 | 44 | 10·68 | 42 | 15·72 | 44 | 21·65 | 50 |
| Late Rains .. .. | 1·20 | 6 | 1·05 | 3 | 3·47 | 5 | 3·02 | 6 | 1·87 | 7 | 4·74 | 8 | 3·09 | 10 | 2·83 | 5 | 4·09 | 9 | 3·34 | 6 | 3·93 | 14 |
| Total .. | 143·76 | 140 | 135·92 | 120 | 150·44 | 125 | 139·92 | 118 | 139·88 | 136 | 42·77 | 110 | 84·49 | 139 | 76·49 | 122 | 40·38 | 121 | 77·09 | 135 | 95·58 | 145 |
| Average.. | 116·62 | .. | 121·46 | .. | 133·11 | .. | 128·38 | .. | 140·91 | .. | 44·37 | .. | 89·18 | .. | 91·56 | .. | 41·25 | .. | 91·94 | .. | 93·93 | .. |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The low land or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—The monsoon broke with the beginning of June, and favourably above and below the Gháts. The fall of Pushya (18th-31st July) was excessive on the coast, submerging rice in low lands and retarding transplantation in some places. The rain of Ashlesha though lighter was not injurious, and the heavy fall of Magha very favourable, though its excess caused a disease in rice in some places. In September Purva and Uttara rain was light but no injury was reported. Hast rain in October was very favourable generally, but the following Chitra rain was too heavy for ripe rice, especially in Kumta and Honávar with its Petha Bhatkal. On the whole the season was a good one. Rice outturn estimated at 10 annas. Garden cultivation thrived well.

## Ratnágiri, 1886.

| Rain Periods. | Ratnágiri. | | Vengurla. | | Málvan. | | Devgad. | | Rájápur. | | Sangameshvar. | | Chiplun. | | Guhágar. | | Khed. | | Dápoli. | | Mandangad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 13·20 | 16 | 11·89 | 14 | 13·67 | 11 | 11·88 | 11 | 14·77 | 12 | 11·46 | 9 | 11·55 | 12 | 3·08 | 6 | 9·55 | 9 | 8·43 | 11 | 9·32 | 14 |
| Monsoon-Kharif .. | 82·52 | 64 | 79·16 | 68 | 76·22 | 71 | 60·61 | 66 | 112·53 | 69 | 130·38 | 69 | 124·91 | 64 | 98·99 | 65 | 107·20 | 67 | 113·93 | 67 | 140·67 | 69 |
| Monsoon-Rabi .. | 23·70 | 43 | 25·41 | 44 | 20·36 | 49 | 23·62 | 29 | 36·12 | 39 | 37·14 | 44 | 38·78 | 47 | 28·09 | 34 | 35·20 | 38 | 35·17 | 41 | 32·04 | 48 |
| Late Rains .. .. | 0·38 | 6 | 1·32 | 6 | 0·43 | 5 | 1·60 | 3 | 2·31 | 7 | 4·40 | 9 | 3·66 | 8 | 0·07 | 1 | 4·05 | 8 | 2·01 | 5 | 2·62 | 9 |
| Total .. | 119·80 | 129 | 117·78 | 132 | 110·68 | 136 | 97·71 | 109 | 165·73 | 127 | 183·38 | 131 | 178·90 | 131 | 130·23 | 106 | 156·00 | 122 | 159·54 | 124 | 185·15 | 140 |
| Average .. | 100·73 | .. | 101·48 | .. | 89·57 | .. | 87·50 | .. | 127·91 | .. | 145·57 | .. | 146·04 | .. | 100·84 | .. | 130·52 | .. | 132·64 | .. | 150·79 | .. |

*General characteristics.*—The district is formed by a narrow belt of low land; though hilly and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Monsoon began early in June (Rohini), being earlier than usual. Sowing rain full and seasonable, except that the fall of 18th June poured in heavy torrents in the north damaging field embankments and submerging rice seedlings. July and August rain was favourable except that the heavy fall of Magha (15th August) brought a disease called Nál to rice and nágli, especially in lowlands. The fall of Purva and Uttara in September, though deficient as elsewhere, was not injurious to any extent. Hast rain in early October came opportunely and sufficiently, and hence the fall of Chitra was unnecessary and slightly injurious to early ripening crops. Year's fall was rather heavy, nowhere less than average; season was good on the whole and the kharif outturn estimated at 10—12 annas.

## Kolába, 1886.

| Rain Periods. | Ali'bág. | | Panvel. | | Uran. | | Pen. | | Roha. | | Mángaon. | | Mahád. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains... ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 5·05 | 8 | 4·27 | 9 | 1·81 | 6 | 4·65 | 9 | 1·45 | 3 | 7·16 | 8 | 4·94 | 10 |
| Monsoon-Kharif ... | 77·55 | 58 | 103·70 | 64 | 105·16 | 55 | 94·93 | 64 | 114·50 | 59 | 116·49 | 62 | 98·30 | 64 |
| Monsoon-Rabi ... | 17·61 | 41 | 27·34 | 46 | 18·89 | 44 | 30·31 | 44 | 32·05 | 40 | 35·51 | 41 | 36·07 | 49 |
| Late Rains ... | 1·93 | 6 | 3·33 | 8 | 2·90 | 5 | 3·99 | 9 | 6·35 | 8 | 3·69 | 8 | 3·86 | 10 |
| Total .. | 102·14 | 113 | 138·64 | 127 | 128·76 | 110 | 133·88 | 126 | 154·35 | 110 | 162·85 | 119 | 143·17 | 133 |
| Average ... | 84·79 | ... | 110·50 | ... | 95·48 | ... | 114·04 | ... | 122·27 | ... | 127·59 | ... | 130·58 | ... |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heavier in parts towards the Sahyádris.

*Remarks.*—Sowing rain came early in June (Rohini). The fall of 18th June abnormally heavy, being no less than 29·57 inches at Uran and 24·80 at Roha, damaging embankments and submerging seedlings. July rain generally favourable and seasonable. The fall in early August light, but that of Magha (from 15th August) plentiful, reviving rice, nágli and varai. The fall of Purva and Uttara in September deficient, causing distress to rice. Relief came with Hast in October, but rather late for rice. Again the rain of Sváti and Vishákha were unnecessary and injurious to ripening crops and to reaped rice and rice-straw. Rice outturn, which promised excellent in beginning, reduced to below average, being from 10—12 annas. Year's fall much above average.

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## Thána, 1886.

| Rain Periods. | Thána. | | Kalyán. | | Karjat. | | Mátheráu. | | Khálápur. | | Murbád. | | Sháhápur. | | Mokháda. | | Bhiwndi. | | Bassein. | | Váda. | | Máhim. | | Dáhánu. | | Umbargaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ... |
| Ante-Monsoon .. | 8·45 | 10 | 6·73 | 8 | 6·09 | 9 | 8·46 | 9 | 3·05 | 7 | 15·57 | 6 | 5·62 | 7 | 1·92 | 5 | 6·89 | 8 | 5·55 | 4 | 0·50 | 3 | 2·92 | 3 | 0·26 | 2 | .. | .. |
| Monsoon-Kharif .. | 82·32 | 63 | 83·18 | 59 | 92·97 | 65 | 139·03 | 66 | 100·71 | 58 | 65·24 | 54 | 69·19 | 55 | 66·11 | 61 | 80·06 | 62 | 62·85 | 59 | 62·90 | 58 | 40·66 | 53 | 49·04 | 48 | 55·89 | 52 |
| Monsoon-Rabi .. | 24·70 | 42 | 27·11 | 45 | 35·29 | 46 | 65·85 | 50 | 29·47 | 39 | 34·29 | 41 | 29·09 | 39 | 34·21 | 43 | 28·93 | 47 | 20·61 | 27 | 27·20 | 37 | 20·10 | 43 | 14·55 | 27 | 14·95 | 32 |
| Late Rains .. .. | 3·53 | 5 | 1·75 | 8 | 2·15 | 6 | 1·75 | 5 | 2·30 | 7 | 2·62 | 5 | 0·90 | 3 | 0·60 | 5 | 0·86 | 3 | 2·35 | 1 | 1·58 | 2 | 2·28 | 3 | 1·40 | 1 | 0·04 | 1 |
| Total .. | 119·00 | 120 | 118·77 | 120 | 136·50 | 126 | 215·09 | 130 | 135·53 | 111 | 117·72 | 106 | 104·80 | 104 | 102·84 | 114 | 116·74 | 120 | 91·63 | 91 | 92·18 | 100 | 65·96 | 102 | 65·25 | 78 | 70·88 | 85 |
| Average .. | 99·12 | .. | 100·73 | .. | 126·91 | .. | 209·71 | .. | 122·09 | .. | 96·15 | .. | 111·34 | .. | 100·92 | .. | 101·79 | .. | 78·85 | .. | 95·96 | .. | 62·67 | .. | 71·39 | .. | 64·83 | .. |

*General characteristics.*—Inland, the district is well watered and well wooded. Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Monsoon broke early in June (Rohini), sufficient to begin sowing except in north where sowing rain came after 18th June in Árdra. The fall of 18th June excessively heavy, doing harm to embankments and washing away the ráb ashes from seed-beds. Sowings generally finished seasonably and rain favourable for early transplantation. Rain continued favourably to the end of Magha, but the break of Purva and Uttara (5th-20th September) injuriously long for rice except on the best land. Hast rain in early October was very favourable for early and late rice, though the latter had suffered and was too near maturity to improve much. Late rains in Chitra and Sváti not desirable and injured reaped rice in some places. Year's fall though above average, was badly deficient in September when a copious fall is needed for ripening rice and consequently rice outturn reduced to 12 annas. Outturn of varkas crops such as nágli, varai and udid was good.

## Surat, 1886.

| Rain Periods. | Surat. | | Olpa'd. | | Ra'nder. | | Ma'ndvi. | | Ba'rdoli. | | Va'lod. | | Jala'lpor. | | Chikhli. | | Balsa'r. | | Pa'rdi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 0·25 | 4 | 0·84 | 3 | 0·35 | 2 | 1·20 | 5 | 0·15 | 2 | 0·65 | 2 | 0·41 | 3 | 0·48 | 4 | 0·28 | 3 | 1·26 | 4 |
| Monsoon-Kharíf ... | 36·03 | 43 | 22·35 | 32 | 31·79 | 50 | 41·32 | 49 | 42·65 | 58 | 44·84 | 45 | 44·18 | 46 | 55·12 | 52 | 51·79 | 56 | 53·37 | 54 |
| Monsoon-Rabi ... ... | 12·46 | 23 | 14·08 | 19 | 14·23 | 27 | 17·65 | 25 | 16·86 | 37 | 15·21 | 19 | 11·84 | 21 | 14·36 | 28 | 17·62 | 30 | 18·35 | 30 |
| Late Rains ... ... | 0·67 | 2 | 0·20 | 1 | 2·67 | 2 | 0·50 | 2 | 0·24 | 3 | 1·30 | 4 | 0·88 | 3 | ... | ... | 0·51 | 1 | 0·24 | 3 |
| Total ... | 49·41 | 72 | 37·47 | 55 | 49·04 | 81 | 60·67 | 81 | 59·90 | 100 | 62·00 | 70 | 57·31 | 73 | 69·96 | 84 | 70·20 | 90 | 73·22 | 91 |
| Average ... | 44·06 | ... | 35·52 | ... | ... | ... | 65·27 | ... | 53·82 | ... | 61·31 | ... | 58·96 | ... | 77·63 | ... | 74·43 | ... | ... | ... |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east dángs with heavy rainfall but light soil. As a rule rain lighter on the coast than inland.

*Remarks.*—Fair preparatory rain of Rohini at the beginning of June, but full sowing rain came with A'rdra in second half of June. July rain, though beneficial to rice, was excessively heavy, damaging other kharíf crops, especially in low lands, and retarding cotton sowing. Break in Ashlesha (1st-14th August) was favourable for completion of cotton and jowári sowing and for re-sowing fields washed over by heavy fall of July. Heavy fall of Magha in second half of August on the whole very favourable, though slightly excessive to newly sown seed in places. The fall of Purva and Uttara in September deficient and break too long for rice. Relief came with the heavy Hast rain in early October, but rice was too near maturity to benefit, though other crops improved considerably. Late rains in Chitra and Sváti were favourable to jowári, bájri and cotton and for sowing pulses after taking off the rice in embanked lands. The season was, on the whole, a favourable one. The jowári crop was excellent, cotton and wheat, though affected by rust in February were fair, and if the rice was not so satisfactory, the succeeding rabi crop yielded a good outturn.

## Broach, 1886.

| Rain Periods. | Broach. | | Anklesvar. | | Hánsot. | | Iláv. | | Vágra. | | Ámod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | .. | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon... | 4·03 | 4 | 1·38 | 5 | 1·90 | 3 | 1·21 | 2 | ... | ... | ... | ... | 0·11 | 2 |
| Monsoon-Kharíf. | 24·27 | 37 | 23·65 | 43 | 13·94 | 26 | 19·41 | 42 | 22·30 | 38 | 29·27 | 25 | 32·03 | 40 |
| Monsoon-Rabi ... | 12·46 | 22 | 13·27 | 17 | 10·64 | 13 | 13·56 | 15 | 12·10 | 19 | 20·53 | 16 | 20·62 | 21 |
| Late Rains ... | 2·40 | 3 | 0·44 | 2 | 1·60 | 4 | 1·52 | 4 | 1·28 | 3 | 0·92 | 2 | 0·53 | 3 |
| Total ... | 43·16 | 66 | 38·74 | 67 | 28·08 | 46 | 35·70 | 63 | 35·68 | 60 | 50·72 | 43 | 53·29 | 66 |
| Average ... | 44·21 | .. | 41·41 | ... | 34·24 | ... | 46 27 | ... | 30·61 | ... | 41·75 | ... | 39·46 | .. |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being as a rule more plentiful in the Broach Táluka. The rainfall is supplemented by heavy dews from October to December.

*Remarks.*—Good preparatory rain came early in June (Rohini) in south, but sowing rain came fully in A'rdra in second half of June. July rain seasonable and moderately heavy, but towards close of month (Pushya) fall excessively injurious, necessitating re-sowing of cotton. Heavy fall of Magha generally favourable, though cotton, being washed over, had to be sown a third time. The fall of Purva and Uttara scanty and break too long, but the heaviness of the previous fall on the moisture-holding black-soil kept the crops in a fairly good condition. October rain favourable on the whole, particularly for late crops though slightly excessive for cotton and reaped rice. Cotton and rabi crops were partially injured by frost in January and February. On the whole season fairly good both for kharíf and rabi.

## Kaira, 1886.

| Rain Periods. | Kaira. | | Mehmadabad. | | Ma'tar. | | Nadia'd. | | Mahudha. | | Kapadvanj. | | Tha'sra. | | Da'kor. | | A'nand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 0·07 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·08 | 1 | .. | .. | 0·15 | 1 |
| Ante-Monsoon .. .. | 0·39 | 3 | 0·08 | 1 | 0·13 | 2 | 0·18 | 4 | 0·47 | 1 | 1·19 | 4 | 0·92 | 2 | 0·28 | 2 | 0·34 | 1 | 0·72 | 1 |
| Monsoon-Kharif .. | 29·85 | 47 | 28·19 | 40 | 26·10 | 35 | 27·48 | 46 | 27·45 | 42 | 28·38 | 44 | 16·45 | 33 | 21·49 | 36 | 18·61 | 34 | 25·06 | 36 |
| Monsoon-Rabi ... .. | 9·39 | 26 | 9·71 | 17 | 13·33 | 20 | 14·84 | 20 | 10·76 | 16 | 11·56 | 21 | 10·76 | 19 | 13·50 | 23 | 8·91 | 18 | 9·42 | 13 |
| Late Rains .. .. | 0·01 | 1 | .. | .. | 0·03 | 2 | 0·22 | 1 | 0·10 | 1 | 0·10 | 1 | 2·75 | 4 | 1·82 | 2 | 0·49 | 2 | 0·10 | 1 |
| Total .. | 39·71 | 78 | 37·98 | 58 | 39·59 | 59 | 42·72 | 71 | 38·78 | 60 | 41·23 | 70 | 30·88 | 58 | 37·17 | 64 | 28·35 | 55 | 35·45 | 52 |
| Average .. | 37·13 | .. | 34·24 | .. | .. | .. | 37·27 | .. | 39·47 | .. | 34·57 | .. | 36·66 | .. | 37·08 | .. | 38·44 | .. | 37·89 | .. |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land; the centre, a tract of most fertile soil yielding the choicest crops; and westward a bare though well cultivated tract of rice land.

*Remarks.*—Good preparatory showers came early in June at Kapadvanj and Thásra, but very light elsewhere. Rain general, well distributed and seasonable in A'rdra in 3rd week of June and sowing in full swing. July rain though favourable for rice and kodra, was excessive, retarding bájri sowing and submerging seedlings in places. Magha rain favourable, though too heavy for young tobacco plants in places. Uttara rain in September badly deficient and break injuriously long for rice, kodra and bájri. Rice helped by irrigation where available. October rain though favourable to rabi was late for rice and bájri and their outturn below average. Rabi crops were fairly good, though wheat and gram were slightly injured by frost.

## Panch Maha'ls, 1886.

| Rain Periods. | Godhra. | | Kálol. | | Hálol. | | Dohad. | | Jhálod. | | Jámbughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon... | 1·86 | 4 | 3·04 | 2 | 2·04 | 2 | 0·49 | 5 | 0·40 | 1 | 2·00 | 5 |
| Monsoon-Kharif | 20·87 | 49 | 21·38 | 40 | 24·31 | 40 | 13·62 | 55 | 17·96 | 38 | 34·69 | 53 |
| Monsoon-Rabi . | 15·18 | 29 | 11·70 | 25 | 11·85 | 22 | 8·57 | 29 | 11·61 | 21 | 13·06 | 27 |
| Late Rains ... | 0·62 | 3 | 0·40 | 2 | 0·35 | 1 | 1·00 | 6 | 1·50 | 2 | 2·16 | 4 |
| Total ... | 38·53 | 85 | 36·52 | 69 | 38·55 | 65 | 23·68 | 95 | 31·47 | 62 | 51·91 | 89 |
| Average ... | 43·24 | ... | 40·20 | ... | 47·97 | ... | 32·56 | ... | 32·65 | ... | 50·69 | ... |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Good preparatory rain came early in June but sowing rain was full and sufficient in A'rdra towards close of June. Heavy rain of July beneficial to rice and kodra, but excessive for maize seedlings and retarded bájri sowing. Magha rain again though generally favourable was slightly excessive for maize. Bájri sowing was late and not completed till the end of August. Uttara rain in September completely absent, and break harmful to rice and other crops except maize which was well forward. Relief came with Hast in October very favourable to late sown rice, bájri, rámtil and pulses, but too late for rice. The fall of Chitra slightly injurious to the crops in harvest but beneficial to rabi sowing particularly for second crops after maize. Maize crop middling, rice 8 annas and rabi fair. Rabi crops especially gram had suffered from severe frost in February.

## Ahmadabad, 1886.

| Rain Periods. | Ahmadabad. | | Parantij. | | Modasa. | | Sanand. | | Viramgam. | | Dholka. | | Dhandhuka. | | Dholera. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | 0·06 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·03 | 2 |
| Ante-Monsoon .. | 2·95 | 5 | 0·55 | 3 | 2·58 | 5 | 1·61 | 5 | 2·75 | 5 | 1·69 | 3 | 6·53 | 6 | 2·47 | 2 | 1·12 | |
| Monsoon-Kharif .. | 25·24 | 35 | 21·02 | 39 | 22·54 | 41 | 19·99 | 38 | 15·16 | 39 | 20·84 | 42 | 20·96 | 38 | 13·83 | 26 | 19·75 | 47 |
| Monsoon-Rabi .. | 5·11 | 18 | 7·90 | 18 | 8·81 | 20 | 7·75 | 20 | 5·94 | 21 | 8·16 | 22 | 12·00 | 15 | 3·75 | 11 | 5·60 | 18 |
| Late Rains .. | 0·15 | 1 | .. | .. | .. | .. | 0·06 | 1 | .. | .. | 0·04 | 1 | 0·70 | 1 | .. | ... | 2·75 | 2 |
| Total .. | 33·45 | 59 | 29·47 | 60 | 33·99 | 67 | 29·41 | 64 | 23·85 | 65 | 30·73 | 68 | 40·19 | 60 | 20·05 | 39 | 29·25 | 72 |
| Average .. | 29·92 | ... | 30·8 | .. | 37·32 | .. | 31·09 | .. | 28·22 | .. | 36·39 | .. | 27·92 | .. | 23·99 | .. | 27·35 | .. |

*General characteristics.*—Except in the hilly parts of Modása where the supply is sometimes considerable, the rainfall throughout the district is generally very light.

*Remarks.*—Preparatory showers generally good all over except Parántíj, but good sowing rain came in second half of June in A'rdra. July rain generally favourable, but in second half injuriously excessive, retarding bájri and jowári sowing and making young plants yellow and sickly. Magha rain generally favourable. The break in Uttara in September was beneficial at first but lasted too long and caused some injury to early crops. Hast rain was also light except in Dhandhuka, but much was not needed. Rabi sowings were seasonably made as there was good moisture owing to ample previous falls. Only cotton sowing was delayed in places for want of rain. Kharíf prospects good in beginning, but outturn affected to a more or less extent by the deficiency of September rain. Rabi crops fair.

# APPENDICES

# APPENDIX A.

## NOTES ON THE CATTLE DISEASES OF THE YEAR 1887.

*Referred to in para. 31 of the Report.*

### Rinderpest.

*Symptoms*:—(1) Increase of temperature in the early stages, decrease in later stages.

(2) Refusal of food. Animal dull and uneasy.

(3) Flow of saliva from the mouth, but not nearly so much as in Foot and Mouth Disease.

(4) The animal sucks air, or smacks its lips. If the mouth is examined it will occasionally be found that there are excoriations on the tongue, gums, palate, lips and pad, but this is a very rare symptom in the Indian form of the disease.

(5) As disease progresses there is a quivering tremor over the forearm and flank. In moving the animal often shows a peculiar gait, not easily described but very characteristic.

(6) Profuse diarrhœa follows. The fœces are mixed with blood and putrid pieces of lymph from the walls of the intestines, which look like fat and are commonly described as *charbi* (these are very distinctive of Rinderpest) and have a peculiar oily and very characteristic odour like rancid oil.

(7) The animal never pricks its ears. They lie flat down.

The characteristic symptoms are profuse diarrhœa and marked loss of strength which occurs suddenly.

In Ratnágiri Mr. Steel noticed ulcers in the nostrils and sore feet which are rather the results of the barbarous local treatment adopted than original symptoms of the disease. The illness lasted from 7 to 14 and sometimes for 30 days. The temperature even in the worst cases was under 104° F. In Bijápur the attack was rather mild and as a rule the animal was not completely off its feed. Causes :—Contagion is the sole direct cause, but among predisposing causes noticed may be enumerated the following :—

(1) Exposure of non-working cattle to heat and cold by day and night in the hot season.

(2) Semi-starvation, followed by unwholesome food, *viz.* rank coarse acrid herbs grown on the river and sea side. Cattle are allowed to wander about on fields to which manure has been applied and buffaloes, especially, eat terrible filth.

(3) Foul drinking water and dirty surroundings.

Contagion is often caused by throwing the carcasses of dead animals into the tidal creeks in Ratnágiri where they are cut up before removal by scavengers.

*Treatment*:—Various local ideas exist about treatment, but none were or can be of any avail. Rinderpest is not a disease for treatment. All that can be done is to prevent its spread by direct or indirect contagion.

All repressive and preventive measures must be directed to (1) isolation of the several villages which are invaded by the disease, and (2) eradication of the disease in each village individually.

I. For (1) separate disease areas to be marked and protected. All the traffic as a rule is along fixed routes and the places of halting are also fixed; cattle of several villages while grazing seldom mix together, on account of height of hills between the valleys, but among the cattle of several hamlets in the same valley very free admixture occurs. The isolation of the valley is practicable and each valley with its hamlets should be taken as a disease area and must be protected from invasion by disease which should be eradicated whenever through defects in isolation, it gets entry.

II. For (2) eradication, (*a*) prompt isolation of the sick necessary.

In each valley one or more homely hospital pounds conveniently placed to leeward of habitations and out of direct lines of traffic and protected by double prickly-pear hedges or walls from access by grazing cattle. Whenever cattle fall off feed and pass liquid fœces mixed with small masses like boiled rice or blood, they should be immediately removed to one of these—which measure experience proves soon lessens the disorder and so saves most valuable stock.

(*b*) Disposal of carcasses so as to prevent spead of disease. The carcasses would be mostly in hospital pounds, one portion of which might be devoted to the cutting up of the carcasses by Mahárs. Rinderpest carcasses may be without objection used as food by Mahárs, but the hides, horns and hoofs should be cut into and slashed so as to prevent their being used for export.

### *Curative Measures.*

Certain to prove unsatisfactory except when entrusted to skilled hands. At present the owners should be recommended when their cattle become affected by rinderpest, which sore experience has taught them readily to recognize, to :—

(1) Promptly remove the sick to an isolated and shady place to leeward of the village.

(2) Tell off a man to take charge of the sick and not let him come among the healthy.

(3) Remove forthwith the healthy from any shed where the disease has been, and burn sulphur over the floor.

(4) Not mix the convalescent with the healthy either in sheds or on pasture.

(5) Support the strength of the sick as much as possible by giving in drenches three times a day the following medicines :—

(*a*) A wine-glass full of strong country liquor.

(*b*) As much of *halad* or turmeric as will rest on a rupee.

(*c*) As much of *sunth* or dry ginger as will rest on a rupee.

(*d*) Twice as much chiratta powder as will rest on a rupee.

(6) See that soil be thrown on the bowel evacuations and urine, and that they be burned with all fodder refused by the animal and which has been near it.

**Malignant Sorethroat or Œdema.**

An anthracoid disease, very sudden in its attack and rapidly running its course, the patient rarely surviving the third day. This and other anthracoid disorders must be carefully distinguished from cases of wholesale cattle poisoning.

*Symptoms* :—At first the throat glands begin to swell and are extremely painful to the touch. Then the whole throat commences swelling and becomes so sore as to make it so painful to swallow that foods and liquids are refused by the animal. Then difficulty of respiration, sonorous and distressing breathing with fetor of breath which, as the complaint advances, turns in some cases so obnoxious that before death it is stinking in the extreme. (Abridged from Gamgee's Domestic Animals in Health and Disease). The swelling very rapidly extends down the neck and over the head and the swollen parts when pressed on are found to be cold and to crackle from the presence of gas under the skin.

Such is a short account of the symptoms of the disease which it is presumed broke out in Hánsot and Viramgám and which was called there swelling of the mouth or neck or throat. From Hánsot the symptoms reported were: swelling of the mouth or neck, animal refuses food or drink, is drowsy and gradually loses strength, and dies within 12 hours after the attack.

Symptoms reported from Ogan near Viramgám :—Sudden occurrence of dullness and imperfect power of moving about from stiffness and lameness of one of the hind limbs, so that the animal persistently stands in one place. Swelling of the throat, loins or chest soon sets in and early death follows. *Post mortem* appearances :—The Dheds who opened the carcasses state—Yellowish watery discharge when the swollen parts cut into. Flesh decomposed and dark, of putrid odour. Tongue when involved very large, dark in colour and discharging a pus-like substance. This seems to have been the form of malignant œdema commonly known as " Black leg" or " Black quarter."

Mr. Vakil attributed the outbreak to—

(1) Contamination of drinking water with filth of all sorts, the village tank being quite near the scavengers' quarters. The water this year was unusually low in the tank.

(2) Want of satisfactory sanitation in the village, especially carcasses being opened near the houses in the Chámbhárs' quarter and the refuse scattered about.

(3) Excessive grazing on reedy pasture.

(4) Contagion especially from refuse of carcasses of victims of the disease.

It was noted that large stores of bones were collected for export and the danger of diffusion of disease by this means was pointed out to the Mámledár and Collector.

**Foot and Mouth Disease.**

A short note of the symptoms of this disease may be added so as to prevent its being taken for Rinderpest. It is similar in some of the symptoms and is intensely contagious. Isolation of affected animals is the best rule in both cases. But as Foot and Mouth Disease is not accompanied by the characteristic diarrhœa of Rinderpest, nor by its mortality, a short time will suffice to diagnose the one or the other. With careful nursing a cure is soon effected. It is seldom a fatal disease.

*Symptoms* :—(1) Increase of temperature followed by severe irritative fever.

(2) Animal sucks saliva which hangs in strings from the mouth.

(3) As disease progresses there is an eruption on the lips, tongue, pad, gums and cheeks. The animal may be slightly lame, and later on becomes very lame and shakes his feet frequently.

(4) The feet show an eruption which develops into ulceration and suppuration.

(5) The hoofs in badly treated cases may become loose and even be thrown off.

## APPENDIX B.

*Exports of Indian Wheat to all Ports beyond the Presidency from 1880 to 1887.*

| Months. | Years. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... ... ... ... | 2,927 | 21,768 | 85,674 | 31,019 | 15,285 | 41,846 | 31,424 | 44,235 |
| February ... ... ... ... | 1,626 | 19,275 | 40,239 | 25,403 | 15,933 | 32,366 | 24,484 | 21,379 |
| March ... ... ... ... | 3,407 | 20,000 | 30,557 | 29,516 | 14,997 | 45,824 | 28,402 | 26,595 |
| April ... ... ... ... ... | 4,985 | 32,481 | 30,390 | 37,503 | 15,230 | 38,933 | 71,581 | 75,325 |
| May ... ... ... ... ... | 17,110 | 42,428 | 67,886 | 76,205 | 44,831 | 56,871 | 124,232 | 101,018 |
| June ... ... ... ... ... | 19,407 | 52,236 | 37,190 | 82,881 | 54,894 | 66,602 | 56,341 | 113,946 |
| July ... ... ... ... ... | 15,055 | 47,369 | 19,386 | 55,921 | 65,437 | 33,379 | 38,715 | 20,172 |
| August ... ... ... ... | 7,832 | 28,172 | 5,396 | 32,425 | 45,546 | 38,004 | 52,896 | 12,657 |
| September ... ... ... ... | 4,193 | 35,132 | 13,797 | 36,265 | 30,974 | 48,975 | 55,461 | ..... |
| October ... ... ... ... | 6,527 | 48,835 | 22,317 | 18,466 | 19,045 | 52,808 | 51,166 | ..... |
| November ... ... ... ... | 8,652 | 76,714 | 34,159 | 29,319 | 28,038 | 59,598 | 37,584 | ..... |
| December ... ... ... ... | 22,991 | 48,559 | 32,703 | 34,508 | 27,806 | 53,977 | 53,433 | ..... |
| Total ... | 114,712 | 472,969 | 419,694 | 489,431 | 378,016 | 569,183 | 625,719 | ..... |

*Annual Report of the Department of Land Records and Agriculture for* 1886-87.

No. 1007.

REVENUE DEPARTMENT.

Bombay Castle, 14th February 1888.

Letter from the Director of Land Records and Agriculture, No. 2061, dated 10th November 1887—Submitting the fourth annual report of the Department of Land Records and Agriculture.

RESOLUTION.—The present report is the first which has contained a detailed account of the varied work of the Circle Inspectors employed in the Dhárwár and Bijápur Districts. The results reported confirm the opinion long held by all Revenue officers that the work of village officers in inspection and in preparation of statistics has been lax and perfunctory, and it is evident that the establishment now provided for the supervision of this work was most urgently needed. It will now be the duty of all district officers including the Divisional Superintendent to see that the supervising staff are kept up to a high standard in the discharge of their work and are given all due support by the táluka officials. The Governor in Council hopes to receive from the Committee appointed by Government Resolution No. 5346 of 15th August 1887 such advice as may help to maintain this important branch of Revenue organization in a high state of efficiency.

2. Arboriculture calls for no remarks here, and the results of the working of experimental farms are separately reported to Government. The experiments reported in Part V. (B) are interesting: those on cotton, mentioned in paragraph 20, and the cost of which was almost nominal, are specially instructive.

3. A clear summary of information collected during the year regarding cattle disease is included in the report in accordance with the directions given in Government Resolution No. 5487 of the 18th August 1887. As Mr. Ozanne points out, the value of the Bombay Veterinary College has already shown itself.

4. One of the most valuable portions of the report is the review of agricultural statistics, for the inclusion of which Mr. Ozanne has, in the opinion of Government, given sufficient reasons. The evidence contained in paragraph 37 regarding the extent to which peculiarities of a season lead to the substitution of one crop for another is particularly worthy of note. A large decrease is reported in the area under jowári, which was to a great extent replaced in the year under review by cotton in the Karnátak and by cotton and bájri in the South Deccan. The large area under cotton is attributed to the season having been favourable for its cultivation. The statistics regarding changes in the areas under wheat, pulses and linseed are also very striking. A full review of such important features in the agricultural history of the year should continue to be included in and should be a special feature of this annual report.

5. The information contained in paragraph 39 regarding the outturn of crops cannot, in the opinion of Government, be considered as even approximately trustworthy. The fact that though the season was on the whole good, especially for certain crops, yet the outturn of almost every crop in every district is reported as below the average, seems to point to the conclusion that some confusion was caused by the local practice of taking 16 annas to represent a full crop instead of an *average* crop as stated in this paragraph. Such statistics require to be carefully checked by local officers.

6. There is a noticeable improvement in the returns of agricultural stock, but for the reasons given by Mr. Ozanne no useful comparison can be made

with the figures for former years. Mr. Ozanne deserves credit for the care with which he has prepared the statistics of rainfall. Trade statistics which have already been submitted to Government need not have been included in the report.

7. Mr. Ozanne's comprehensive and interesting report gives proof of the zealous and intelligent administration of his department.

J. DE C. ATKINS,
Under Secretary to Government.

To

The Director of Land Records and Agriculture,
The Commissioner in Sind,
The Commissioner, N. D.,
The Commissioner, C. D.,
The Commissioner, S. D.,
All Collectors, including the Collectors and Deputy Commissioners in Sind,
The Survey and Settlement Commissioner,
The Accountant General,
The Conservator of Forests, N. C.;
The Conservator of Forests, S. C.,
The Conservator of Forests, Sind Circle,
The Superintendent, Bombay Veterinary College and Hospital,
The Military Department of the Secretariat,
The Political Department of the Secretariat,
The Public Works Department of the Secretariat.
} With copies of the report.

The Government of India,
The Secretary of State for India.
} By letter.

---

No. of 1888.

Copy forwarded for information and guidance to

# ANNUAL REPORT

OF THE

# DIRECTOR, LAND RECORDS AND AGRICULTURE,

## BOMBAY PRESIDENCY,

FOR THE YEAR 1887-88.

Bombay:
PRINTED AT THE GOVERNMENT CENTRAL PRESS.

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No. 2002 OF 1888.

From

J. W. P. MUIR-MACKENZIE, ESQUIRE,
Acting Director, Land Records and Agriculture,
Bombay;

To

JOHN NUGENT, ESQUIRE,
Chief Secretary to Government,
Revenue Department,
Bombay.

*Poona, 15th November 1888.*

SIR,

I have the honour to submit the Annual Administration Report of the Department of Land Records and Agriculture for 1887-88.

Mr. Ozanne, the permanent incumbent, held the office from the commencement of the year till the 16th February last when he went on furlough and since then I have been acting for him.

2. The Director visited the Bhadgaon Farm from 22nd to 27th November in connection with certain changes proposed to be made there. Between the 5th and 9th December he visited Alegaon in company with the Commissioner, C. D., to discuss on the spot a scheme for establishing a farm there for various objects including improvement of mule-breeding, beef and mutton supply, ensilage, &c. In the same month (10th to 13th) the Director went to Nágpur under orders of Government to meet Sir Edward Buck. In January (5th to 10th) he visited Dhárwár and in February (5th to 8th) was called to Bhadgaon owing to the illness of the Superintendent of the Farm, Mr. Stormont. I visited Bijápur (28th February to 14th March) in company with Ráv Bahádur Bhimbhái Kirpárám, arranged for the location of the survey records and proceeded to the south of Bádámi to start the complete boundary-mark inspection in that táluka and the adjoining táluka of Ron in Dhárwár. From this work I was summoned by Government to attend the Delhi Conference in company with Professor Steel, Principal of the Veterinary College, Bombay. The 19th to 25th March was occupied in Bombay receiving instructions and studying the various records. The Conference sat from the 29th March till 4th April 1888, during and after which, with the permission of Government, I visited the Hisar Cattle Farm, the Forest College, Dehra Dun, the Horse Depôts and Nursery at Hapur, Saharanpur, and the Cawnpore Experimental Farm. On the 16th I returned to Bhadgaon Farm for some inspection of the buildings there, and thence proceeded to Mahábaleshvar to report certain matters personally to Government (19th to 26th April). In May (6th to 20th) I visited Ratnágiri district in connection with the introduction of the Circle Inspection system. Since then I have been obliged to remain in Poona owing to my duties in connection with the farm there and special work requiring my presence at head-quarters.

3. The Department has suffered a conspicuous loss in the death of Mr. Stormont, the Superintendent of the Bhadgaon Farm. His work is being carried on by Mr. P. R. Mehta, M.R.A.C., with efficiency and success. The work of the office has been somewhat severe owing to the undertaking of Mr. Price's duties while he was on leave, and the deputation of Ráv Bahádur Bhimbhái Kirpárám from 20th July 1888. Mr. Price was on duty throughout the year except in January and February when he took privilege leave.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

4. No progress has been made in the extension of the Circle Inspector system to the other parts of the Presidency. Financial pressure had operated to

prevent the increase of Revenue establishments while that of the Survey and Settlement Department is uncontracted. The whole question of the financial economy of the district system as worked by the Agricultural Department has come under the consideration of Government, who have indicated their opinion that in view of financial necessities radical alterations of policy are necessary. The future extension, therefore, of the district organization is uncertain and must await final decision upon this important question.

5. The following tables exhibit the work of the circle inspecting staff and the supervision exercised over the Circle Inspectors by the officers of the Agricultural Department :—

**A.—Annual Inspection (November to February) by Circle Inspectors.**

| District. | | Crop Inspection. | | | | | | | Waste Inspection. | | | | | Boundary-Mark Inspection. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total number and area of occupied Survey Numbers. | | Total number and area of inspected Survey Numbers. | | Number in which entry in Village Form III | | | Number of Waste Numbers other than Forest. | Total number and area of inspected Waste Numbers. | | No. in which unauthorized cultivation or other encroachment detected. | | Number of Marks inspected. | | Number of Marks found in disrepair. | | |
| | | No. | Area. Acres. | No. | Area. Acres. | Found correct. | Corrected. | Found blank and filled in. | | No. | Area. Acres. | Reported by Village Officers. | Not reported by Village Officers. | In Occupied Numbers. | In Waste Numbers. | Shown in Village Form III. as in disrepair. | Not shown in Village Form III. | Shown as in repair. |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Dhárwár... | 1887-88.. | 151,412 | 1,852,622 | 11,970 | 110,156 | 3,704 | 5,067 | 3,199 | 9,137 | 2,579 | 24,937 | 5 | 14 | 153,089 | 41,128 | 2,168 | 25,932 | 5,279 |
| | | | | 7·90 | 5·94 | 30·94 | 42·33 | 26·73 | | 28·22 | | | | | | | 31,211<br>93·50 | |
| | 1886-87.. | 171,551 | 2,086,151 | 14,254<br>8·31 | 122,081<br>5·85 | 4,278<br>30 | 3,934<br>27·6 | 6,042<br>42·4 | 10,539 | 2,919<br>27·7 | 30,315 | 2 | 33 | 161,671 | 42,059 | 5,624 | 57,863<br>91·14 | |
| Bijápur ... | 1887-88.. | 159,656 | 2,678,824 | 17,512 | 244,211 | 5,052 | 7,010 | 5,450 | 10,452 | 2,777 | 45,056 | 4 | 26 | 197,775 | 36,597 | 8,136 | 39,520 | 8,285 |
| | | | | 10·96 | 9·11 | 28·85 | 40·03 | 31·12 | | 26·57 | | | | | | | 47,805<br>85·45 | |
| | 1886-87.. | 164,650 | 2,740,713 | 17,554<br>10·66 | 237,560<br>8·67 | 5,214<br>29·70 | 7,807<br>44·48 | 4,533<br>25·82 | 14,574 | 2,450<br>16·81 | 39,867 | 7 | 33 | 189,439 | 30,443 | 8,546 | 61,533<br>87·8 | |

During the current year the inspection period was shortened by fifteen days for the purpose of bringing up to date the corrections in maps and records necessitated by the complete boundary-mark inspection of the previous year. This fact must not be forgotten when comparing the work with last year's. It will be found that over occupied and waste land together the following work was done :—

| District. | 1887-88. | | 1886-87. | |
|---|---|---|---|---|
| | Nos. | Area. | Nos. | Area. |
| | | Acres. | | Acres. |
| Dhárwár ... ... | 14,549 | 135,093 | 17,173 | 152,396 |
| Bijápur ... ... | 20,289 | 289,267 | 20,004 | 277,427 |
| Total ... | 34,838 | 424,360 | 37,177 | 429,823 |

Thus over the two districts the work in 1887-88 shows an apparent decrease of 2,339 Survey Nos. and 5,463 acres in area ; but remembering that the work had to be done in $\frac{7}{8}$ths of the time allotted last year there will be seen to have been a slight improvement in the quantity of inspection done. This improvement is confined to Bijápur where, notwithstanding the shorter time allowed, the numbers and area actually show a slight increase over last year. The work performed amounts to 373 numbers per man in Dhárwár and 507 in Bijápur ; or allowing 80 working days for the period of inspection 4·6 numbers per diem in

Dhárwár and 6·3 in Bijápur. The standard prescribed by the rules has not been reached in either district. This must in a great measure be ascribed to the increase of the work described in Statement D. In Dhárwár also much of the country is more difficult than in Bijápur, while I think the results of columns 6—8 and 16—18 of Form A show that the test was stricter in Dhárwár. There was certainly less to complain of in the supervision of that district during the current year. At the same time I believe the standard of crop inspection laid down in the rules might be more nearly attained. But the fact remains that while an enormous increase of miscellaneous and measuring work more than accounts for the falling off in Dhárwár crop inspection, the Bijápur staff has managed to show a substantial improvement; so that I think there is no ground for dissatisfaction with the field work of the staff as a whole in either district.

*Crop Inspection.*—The percentage of inspection in occupied numbers shows a slight improvement in Bijápur, but as the total area on which the percentage is taken differs in the two years this test is fallacious.

In Bijápur there is nothing to show any improvement in the work of the village officers. The percentage of correct entries is a little smaller and that of blank entries to be filled in is even larger. In Dhárwár the correct entries are more numerous, while the blank entries have come down from 42·4 to 26·7 per cent. But it will be observed that the percentage of corrections has increased in proportion. A correction is only made when the error is found to be over 25 per cent. A blank entry, however, means an error of 100 per cent. for the particular case, so that the improvement if any consists merely in the blanks having been filled up by grossly mistaken estimates. But after all, the numbers are an unsafe guide to the quality of the work done. For the case of mixed crops a kulkarni's estimate may easily differ 25 per cent. from the inspector's while the actual error is very small. I cannot but think that if minor mixed crops other than row crops were excluded from consideration in computing areas, much less error would be found to exist in the kulkarni's estimates and much less necessity for correction by the inspectors. The mention of the existence of a mixed crop is, I think, essential as a record of an important agricultural practice, but except where it is a row crop, or, say, occupies one-tenth of the total area of the field, the estimate of its area is not worth checking. But the absence of blank entries shows that the inspection by the kulkarnis was done to a greater extent in the field, which is of course a notable improvement. The crops ascertained to exist were entered; errors were made only in the calculation of their amount. It is clear also that in Dhárwár the kulkarnis were enabled to begin their crop inspection more punctually than usual.

*Waste Inspection.*—The percentage of waste inspected was 28·22 in Dhárwár and 26·57 in Bijápur. This percentage in Bijápur which was low last year for reasons duly explained has now reached its proper figure. The whole of the waste will thus be gone over in four years.

*Boundary-mark Inspection.*—The results again show that the kulkarnis do little or nothing in the way of real inspection, at any rate during the season when the Circle Inspector is making his visits. Of the total marks found in disrepair 93 per cent. in Dhárwár and 85 per cent. in Bijápur were brought to notice by the Inspectors, while of the marks reported as out of repair nearly four-fifths in Dhárwár and three-fourths in Bijápur were not mentioned at all, and one-sixth in Dhárwár and one-seventh in Bijápur were actually shown as in repair by the kulkarnis.

**B.—Complete Boundary-mark Inspection—(March to May).**

| District. | Táluka. | Number of Villages. | | Number of Survey Numbers. | | Number of Marks requiring to be erected or repaired as noticed at first inspection. | | | | Number of Marks remaining to be erected or repaired after re-inspection. | | | | Total number of Marks found redundant. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Entirely wanting. | | | | Entirely wanting. | | | | Redundant by Rule 7, Chapter V of Circle Inspectors' Rules. | | Redundant by Rule 10. | | Total. | |
| | | Inspected. | Remaining to be inspected. | Examined. | Remaining to be examined. | Requiring their position to be fixed by measurement. | Not requiring measurement to fix their position. | In disrepair. | Total. | Requiring their position to be fixed by measurement. | Not requiring measurement to fix their position. | In disrepair. | Total. | Mounds. | Stones. | Mounds. | Stones. | Mounds. | Stones. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Dhárwár .. | Ron .. | 48 | .. | 13,200 | .. | 9,509 | 4,817 | 9,896 | 24,222 | 257 | 153 | 3,004 | 3,414 | 1,606 | 78 | 33,690 | 1,077 | 35,296 | 1,155 |
| Bijápur .. | Bádámi .. | *103 | 32 | 15,140 | 4,022 | 3,869 | 3,914 | 16,200 | 23,983 | 1,606 | 2,846 | 12,884 | 17,336 | 4,704 | 156 | 33,439 | 597 | 38,143 | 753 |

* Besides these, 15 villages with 1,268 survey numbers were inspected in the previous years.

6. Strenuous efforts were made during the present season to get this work done at a rapid rate of progress. The method adopted in consultation with the Collectors was to concentrate the Circle Inspectors upon a single tract and thus to bring them under the eye of the District Inspectors and Mr. Price, thereby ensuring the best possible division of labour, mutual help and direction of energy, while I was able to give the work a start and remain a short time within reach of the whole corps of Inspectors to settle difficulties as they arose. The plan so far succeeded, that considerably more than double the number of fields was inspected compared with last year, while repairs were effected in 27,455 marks and no less than 73,439 mounds and 1,908 stones were cancelled as redundant. The method adopted was as follows: First the fields were gone through and a note taken of all marks out of repair, the rayats warned to repair them, and redundant marks cancelled. Then the villages were re-inspected and the marks not then found in repair were put at once into such repair as was required. The results at re-inspection are the gauge of the completeness of the work. They are excellent in Dhárwár but disheartening in Bijápur. The reasons for this difference of result are thus described by Mr. Price:—

"The statements I have already sent in, showing the work of complete boundary-mark inspection done in the Ron and Bádámi Tálukás, show the work in the Ron Táluka well nigh completed, while in the Bádámi Táluka there is a considerable amount yet to be got through. The reason for the work in the Ron Táluka getting on so well is due partly to the land being chiefly of black soil, which is easily dug for the purpose of repairing and erecting mounds, to the country being flat and open and therefore easy to work through, also due considerably to the Circle Inspectors being well handled by the Dhárwár District Inspector and his District Assistant and also to the rayats being in comparatively easy circumstances; this enabling the Mámledár to generally get them to give their voluntary help to get the work done. With regard to the Bádámi Táluka, the reasons the work there did not progress as rapidly as was desired are, the greater portion of the táluka is of red soil which where not loose and sandy is very hard to dig; the boundary lines of survey numbers are often covered with hedge growth, making it difficult to readily inspect the survey marks along them, the Circle Inspectors were more or less, at the commencement of the work, not under thorough control of the District Inspector and his District Assistant, and the rayats are in many parts very poor, which circumstance must have acted against the Mámledár's efforts to induce them to give voluntary labour to repair and erect the marks found wanting."

These reasons no doubt largely account for the difference. But I am unable to resist the inference that the zeal and ability of the Dhárwár District and Assistant District Inspectors had more than anything else to do with it. It is true that Bádámi is a far more difficult táluka than Ron. But at the same time the total number of marks requiring repair was nearly the same in both tálukás, but in Ron the cases in which marks required entire replacement

were nearly double, and those requiring remeasurement as well, two and a half times as many as those in Bádámi. Notwithstanding this the Dhárwár staff managed to get through 97 per cent. of its restoration work and two-thirds of its repair, while the Bijápur staff could not effect even half its restoration and one-fifth of its ordinary repairs. With every allowance for difficulties of country I feel bound to state that the Dhárwár staff in my opinion worked far the better of the two and indeed very creditably. At the same time I feel it right also to allude to the intense repugnance to field work exhibited by the Circle Inspectors and the excessive difficulty found in getting them to do a respectable amount of it. It was remarked both by Mr. Price and myself that even the older hands of the Survey Department being free from a discipline enforced by it, no longer gave a good day's work. Such a thing as three hours' steady field work seemed to be considered enough to incapacitate a man for a full day's office afterwards. I mention this merely to emphasize the principle that strict test and severe discipline is indispensable for getting either *sufficient* or *efficient* field work from the clerkly subordinates of the Revenue Department and that for the work connected with the Land Records and Statistics which the Agricultural Department has had to do, a strong supervising staff is essential.

7. The question arises as to the utility of the complete Boundary-mark Inspection. It is certain that without some such measure the present inspecting agency could not undertake the effective performance of the inspection demanded under the rules. Complete Boundary-mark Inspection was therefore introduced as a preliminary to the enforcement of rule 104 under the Land Revenue Code, and with the object of securing the marks being in thoroughly effective state of repair at the next revision. Mr. Spence, Acting Collector of Dhárwár, has been in correspondence with me on the subject, and it is clear to me as to him that we cannot even with greater efficiency hope more rapid progress over the whole district than has been attained this year in a comparatively easy táluka. That means that the district will take from 10 to 12 years, and were the whole district as difficult as Bádámi in Bijápur the time taken would be longer. Ron Táluka was subjected to revision measurement about eight years ago and underwent its preliminary inspection a year or two before, notwithstanding which its boundary-marks are very much out of repair. By the time therefore that rule 104 had been applied to the whole district Ron would be in about as bad a state as it was this year. It is no use introducing Rule 104 into Ron alone, because its Inspectors would be required to assist at the complete Boundary-mark Inspection of the rest of the district, just as the Inspectors of the rest of the district have helped at the Ron complete Boundary-mark Inspection, and, these three months away from his circle, no Inspector could get through one-fourth of his boundary marks in a season. I cannot but think that with an improved agency to maintain boundary-marks during settlement periods the only time when a complete inspection would be of use would be just before revision. It is a pity to concentrate the energies of this highly trained staff for one-fourth of every year upon work which is not wanted till the year of revision. There is plenty of other work to give the Circle Inspectors and I am certainly inclined to suggest the discontinuance of complete boundary-mark inspection as part of the regular annual programme. One good effect resulting from the complete boundary-mark inspection has been that the rayat has been relieved from the obligatory maintenance of an average of nearly three marks per field.* The difficulties regarding these redundant marks and their large number came to light during the complete boundary-mark inspection of the current year, and on the subject being represented to Government, Resolution No. 3502, dated 30th May 1888, was passed, by which it was directed that the marks should be disfigured on the ground and cancelled on the maps and records, the fact pointed out to the rayats and then be allowed to die a natural death. It has also been demonstrated that with the present number of boundary marks to keep in order and the present state of efficiency or inefficiency of the village officers and apathy of the rayats regarding the state of the marks, the present staff of Inspectors cannot while performing the other duties assigned to it effectively inspect and get

| | Bijápur. | Dhárwár. |
|---|---|---|
| Total number of marks ... | 38,896 | 36,451 |
| Total number of fields ... | 15,140 | 13,200 |
| Average per field ... | 2½ | 3 |

maintained one-fourth or any thing like one-fourth of the marks in a single season and that if the present number of marks is to be inspected some modification in Rule 104 will be inevitable. If the Inspectors are relieved of the duty of inspecting the great bulk of the marks, as is likely if the scheme propounded in the last paragraph of Government Resolution No. 6403, dated 22nd September last, is carried into effect, complete boundary-mark inspection will cease to exist.

**C.—Check Census of Population and Live Stock—(July and August).**

| Villages with Population. | Dha'rwa'r. | | | | | Bija'pur. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Villages. | Total Population. | Total number of Entries. | Number of Entries checked. | Number of Items corrected. | Number of Villages. | Total Population. | Total number of Entries. | Number of Entries checked. | Number of Items corrected. |
| Under 500 ... ... | 469 | 120,227 | 24,523 | 24,176 | 10,411 | 523 | 135,318 | 28,902 | 28,127 | 13,236 |
| Over 500 and below 1,000 ... ... | 201 | 142,281 | 27,897 | 14,097 | 5,206 | 205 | 140,991 | 29,530 | 15,622 | 8,036 |
| Over 1,000 ... ... | 167 | 395,766 | 76,537 | 19,691 | 8,124 | 149 | 308,163 | 66,374 | 17,033 | 8,624 |
| Total ... | 837 | 658,274 | 128,957 | 57,964 | 23,741 | 877 | 584,472 | 124,806 | 60,782 | 29,896 |

8. The form of last year is modified in order to show the proportion of entries checked, which was fully up to the standard. But 204 villages in Bijápur and 463 in Dhárwár remained unvisited, owing, principally, to the curtailment of the period allotted for census duties caused by the extension of the complete Boundary-mark Inspection into June, and consequently of the compilation into July. It will be seen that something like half the entries were checked.

The number of errors requiring correction shows a large decrease compared with last year. But this decrease is merely apparent, and is owing to the fact that a single error involves considerable number of alterations of other figures effected by it. Each alteration was enumerated last year. But this year only each error detected is enumerated. Measures are being considered for obtaining a more correct estimate regarding the accuracy or inaccuracy of the village accountant's work. But next year's figures even on the present basis will be some guide as to whether any improvement has taken place. The knowledge that errors will run risk of detection in 50 per cent. of their work should make kulkarnis far more careful; so that while the percentage of check will, I trust, not diminish, it may be hoped that that of error will show a substantial decrease.

**D.—Statement showing the Measurement Work done by the Circle Inspectors.**

| No. | Classes of Cases. | Dha'rwa'r. | | | | Bija'pur. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Arrears on 31st July 1887. | New cases. | Disposed of. | Arrears on 31st July 1888. | Arrears on 31st July 1887. | New cases. | Disposed of. | Arrears on 31st July 1888. |
| 1 | Partitions of land under decree of Court ... | 2 | 24 | 23 | 3 | ... | 10 | 9 | 1 |
| 2 | Subdivisions on application of occupants duly sanctioned ... ... ... | 10 | 23 | 22 | 11 | 2 | 10 | 9 | 3 |
| 3 | Disputes necessitating remeasurement of fields ... ... ... ... | 29 | 68 | 60 | 37 | 5 | 32 | 20 | 17 |
| 4 | Disputes requiring fixing of marks by the field books ... ... ... | 83 | 161 | 124 | 120 | 43 | 97 | 88 | 52 |
| 5 | Encroachments ... ... ... | 103 | 211 | 199 | 115 | 32 | 118 | 93 | 57 |
| 6 | Measurement of alterations caused by alluvion and diluvion ... ... ... | 26 | 96 | 83 | 39 | 27 | 51 | 53 | 25 |
| 7 | Measurement of land required for public purposes— | | | | | | | | |
| | (a) Extramural burial grounds ... | 31 | 94 | 75 | 50 | 4 | 10 | 13 | 1 |
| | (b) Tanks ... ... ... | 22 | 22 | 26 | 18 | ... | ... | ... | ... |
| | (c) Roads ... ... ... | 16 | 29 | 25 | 20 | 2 | 10 | 6 | 6 |
| | (d) Dharmashálás and other public buildings ... ... ... | 4 | 7 | 9 | 2 | 3 | 4 | 6 | 1 |
| 8 | Measurement of land for building sites ... | 24 | 121 | 96 | 49 | 20 | 90 | 80 | 30 |
| 9 | Reclassification of survey numbers ... | 1 | 9 | 6 | 4 | 1 | 2 | 3 | ... |
| 10 | Miscellaneous ... ... ... | 60 | 140 | 102 | 98 | 24 | 165 | 133 | 56 |
| | Total ... | 411 | 1,005 | 850 | 566 | 163 | 599 | 513 | 249 |
| 11 | Other cases ... ... ... | 203 | 2,220 | 2,064 | 359 | 36 | 364 | 338 | 62 |
| | Grand Total ... | 614 | 3,225 | 2,914 | 925 | 199 | 963 | 851 | 311 |

9. In comparing the amount of measuring work done by the Circle Inspectors in different years up to the present "miscellaneous" cases have not been taken into account because they included work other than measuring. The measuring miscellaneous cases have been separated from the non-measuring. Comparing with last year, it will be seen that measuring other than "miscellaneous" has remained almost stationary. But the total amount of work other than that described in Statements A, B, C, has largely increased in both districts. This taken into account, the amount of arrears existing is not to be wondered at, especially in Dhárwár, where the miscellaneous work is tremendously heavy and increases apparently by leaps and bounds.

The total work under this head and arrears are as follows:—

| District. | Increase of work per cent. | Percentage of arrears. | |
|---|---|---|---|
| | | 1886-87. | 1887-88. |
| Dhárwár ... ... | 34 | 24 | 24 |
| Bijápur ... ... | 38 | 23 | 27 |

Thus with an increase of work over 35 per cent. the arrears have remained the same in Dhárwár and have increased only 4 per cent. in Bijápur. This is I think decidedly creditable. The measuring and miscellaneous work is far less in Bijápur but the crop and boundary-mark work is proportionately increased. As stated in last year's report, the arrears figures would be far smaller if they could be brought up to the end of October which is the month in which measuring work is cleared off.

The number of encroachments it will be observed has decreased. A large increase was shown last year owing to the strict supervision exercised by the Inspectors, and I venture to believe that the decline this year is due to the wholesome fear of detection which was created by systematic inspection. The encroachments at first detected were some of them ten years old. Such cases can no longer exist. The large number and in Dhárwár the decided increase of cases under Classes 3, 4 and 6, shows how useful the staff can be in the settlement of disputed cases and correction of alterations caused by alluvion and diluvion.

10. Besides the duties detailed above the Circle Inspectors exercise an irregular but continuous check over the registration of births and deaths and of the statistics of small-pox and cholera, and compile the táluka forms the details of which were noticed last year (Report paragraph 7). No complaints of unsatisfactory work have been received. Upon the Inspectors' work as a whole I think it but just to quote the following remarks by the Collectors of Dhárwár and Bijápur:—

**Mr. Spence (Dhárwár)**—

"I do not in any way wish to take the credit to myself as the work has been done entirely by the Agricultural Department, but I should like to be allowed to add that this report seems to me to show most conclusively in how immeasurably superior a way our knowledge of the season and crops is placed on record, than it was before that Department came into existence and every year will add to its knowledge and utility."

**Mr. Ebden (Bijápur)**—

"I desire to record my sense of the excellent manner in which the District Inspector and his subordinates have worked up the returns. The statements and explanations have been prepared with a punctuality and perspicacity never attained before and a very valuable record has been secured. By such capital work as this the new system is very much justified."

11. The following statement shows the work of the District and Assistant District Inspectors, from November to February, *i.e.* exclusive of the complete Boundary-mark Inspection work:—

**E.—District and Assistant District Inspectors' Work.**

| District. | Crop Inspection. | | | | Waste Inspection. | | | | Boundary-Mark Inspection. | | | Correspondence. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total number of occupied Survey Numbers inspected by Circle Inspectors. | Number of occupied Survey Numbers tested by District and Assistant District Inspectors. | | | Total number of Waste Numbers inspected by Circle Inspectors. | Number of Waste Numbers tested by District and Assistant District Inspectors. | | | Number of Marks tested by District and Assistant District Inspectors. | | | | |
| | | Total. | Satisfactory. | Not satisfactory. | | Total. | Satisfactory. | Not satisfactory. | Total. | Satisfactory. | Not satisfactory. | Inward Numbers. | Outward Numbers. |
| Dhárwár | 11,970 | 208 | 143 | 65 | 2,579 | 54 | 52 | 2 | 3,690 | 3,464 | 226 | 3,353 | 2,590 |
| Bijápur... | 17,512 | 138 | 127 | 11 | 2,777 | 13 | 12 | 1 | 2,236 | 2,226 | 10 | 2,607 | 3,345 |

The work in Dhárwár is better than last year, although I consider it even now insufficient; that in Bijápur is most unsatisfactory. The District Inspector was on leave during the working season and the Assistant District Inspector, Mr. Limaye, gave a great deal of trouble and had to be very severely dealt with. The District Inspectors certainly have more office work than is advisable. Besides testing the Inspectors' work they have to visit the Head Quarter office periodically. Measures are being considered for the reduction of this office work. What is inexcusable is the Assistant District Inspector's small amount of field work in Bijápur, as his office work was light.

The percentage of unsatisfactory work among the Circle Inspectors is meritoriously low for waste and boundary-mark inspection. For crop inspection the result appears much worse in Dhárwár than Bijápur. The reason, I have not the slightest doubt, is that the supervision over the Inspectors was stricter and more thorough in Dhárwár. Mr. Price is evidently of this opinion and my own experience of the supervising officers leads me to agree with him entirely.

**F.—Head-quarter Office Work.**

| District. | Number of cases received necessitating corrections in Survey Records. | Number of Akárbands, Maps, and Field Books corrected. | Number of extracts from Field Books sent to Circle Inspectors. | Number of extracts from Survey Books supplied to Revenue Officers and Petitioners. | Number of Maps supplied to the Village Officers. | Correspondence. | |
|---|---|---|---|---|---|---|---|
| | | | | | | Inward. Nos. | Outward Nos. |
| Dhárwár ... | 125 | 919 | 637 | 25 | 174 | 2,200 | 219 |
| Bijápur ... | 197 | 1,399 | 222 | 11 | 288 | 1,596 | 174 |

12. The current work of these offices shows no tendency to decrease, while the work in Dhárwár has been perceptibly heavier in the year under review. The decrease under column 5 is only nominal, the number of last year being swelled by extracts furnished to Circle Inspectors through the Mámledárs, but not given direct.

The work of dividing the record into two batches as a protection against fire has been actively pushed. The plan pursued was to place the rough and fair records in different parts of the building, thus securing that if one-half of the record is burnt the other half can be prepared from it. A few documents, which do not exist in both rough and fair form, have to be copied. The progress attained in this work is shown in the statement given below :—

| District. | Revision. | | | | | | | Revenue. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Tálukás of which the Papers are received. | Survey Papers. | | | Printed Maps. | | | Number of Tálukás of which the Papers are received. | Survey Papers. | | | Printed Maps. | | |
| | | Number of Villages of which Survey Papers have been received. | Number of Villages of which Survey Papers have been divided. | Number of Villages of which Survey Papers remain to be divided. | Number of Villages of which Maps have been received. | Number of Villages of which Maps have been divided. | Number of Villages of which Maps remain to be divided. | | Number of Villages of which Survey Papers have been received. | Number of Villages of which Survey Papers have been divided. | Number of Villages of which Survey Papers remain to be divided. | Number of Villages of which Maps have been received. | Number of Villages of which Maps have been divided. | Number of Villages of which Maps remain to be divided. |
| Dhárwár .. | 11 | 1,284 | 1,284 | .. | 1,284 | 1,284 | .. | 9 | 1,430 | 565 | 865 | 1,430 | 296 | 1,134 |
| Bijápur .. | 8 | 919 | 919 | .. | 908 | .. | 908 | 8 | 1,077 | 270 | 807 | 1,078 | .. | 1,078 |

At the visit to Bijápur in March the additional space assigned and the buildings set apart for accommodation of the records were personally examined, and all details of arrangement of the record settled by me in personal consultation with Mr. Price.

13. Mr. Price, Divisional Superintendent, has worked with his accustomed energy and his experienced assistance was invaluable to me on taking over charge of the hitherto completely unfamiliar duties of my post. He was occupied in November in supplementing his work of last year in connection with the lands irrigated from the Ilkal nála, and further proposals of his reduction of assessment were supported by the Survey and Settlement authorities and sanctioned by Government. In January and February Mr. Price was on privilege leave, his duties being undertaken by this office, the burden of the work by no means inconsiderable falling on Ráv Bahádur Bhimbhái Kirpárám, the Personal Assistant. Mr. Price returned to supervise the complete boundary-mark inspection and exerted himself unsparingly in the field to urge on the work and instruct both District and Circle Inspectors in this branch of their duties.

Again, no reports or comments were received by Mr. Price from Mámledárs and Assistant and Deputy Collectors upon the work of the Circle Inspectors. This importance of intercommunication between the District Revenue officers and Mr. Price was expressly mentioned in last year's report.

Mr. Price has forwarded no special remarks upon the efficiency of the District and Assistant District Inspectors. With one lamentable exception their work has been satisfactory, that of the Dhárwár officers especially so.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

14. The required analysis of districts (last Report, paragraph 10) has been prepared in the form of a Statistical Atlas containing Presidency and district maps with tables of statistics and other statistical information required by the Famine Code. The draft of the text was completed by Mr. Ozanne at considerable labour before he went on leave. A proof copy of the Atlas was, as desired by Government, forwarded to the Commissioners and Collectors, for revision and scrutiny, and a proof revised by me and incorporating the suggestions of the District officers has been submitted to Government.

The Atlas not only contains the information for each district under the heads prescribed in Section 17 of the Famine Relief Code, but the introduction and appendices give in a succinct form very useful and valuable summaries and statistics for the Presidency regarding rainfall, locust and rat plagues, former famines and floods, crops and crop diseases, staple food grains and fodder, and other kindred matters, the knowledge of which is desirable for famine administration. By arrangement and condensation all statistics relating to agricultural facts of the district in full tálukvár details are so printed that they are contained in a single page and thus made easily accessible for reference and comparison. The analyses of caste and statistics given for each district under the head

"Economic condition of the people" have been compiled in a condensed form after much labour from the bulky accounts published in the Gazetteer. The analyses on the whole convey an accurate and tangible idea of the economic condition of the various grades of people and of their relative strength and will, it is hoped, be a very useful guide to the District Officers. The district maps show railways, roads, travellers' bungalows, irrigation works, areas liable and not liable to famine and many other important details and have been exceedingly well got up by the Photozinco Department.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

15. There is nothing to report under this head.

## IV.—MEASURES OF PROTECTION, INCLUDING

(1) *Fodder Reserves and Arboriculture.*

(2) *Extension of Communications.*

(3) *Irrigation.*

### (1) *Arboriculture.*

16. No information has reached this Office regarding the extension of bábhul plantation. Resolutions in which applications for lands on easy terms, in consideration of their being appropriated to this purpose, are granted, used to be forwarded to this Office. But as none have come during the year under report it is presumed that no fresh applications have been made. It is to be hoped that this important matter is not being allowed to drop. It lies with the District Officers to help it on by explaining to cultivators the advantages to be gained.

### (3) *Irrigation.*

17. The scheme to extend irrigation in Kaira by steam pumping from the Vatrak river started by Mr. Sugden has collapsed owing to his decease. There is perhaps a better opening in Sind than elsewhere for enterprise of this sort.

The Viramgám drainage cut has been started and about Rs. 9,000 are to be spent on it during the present season.

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

### A.—Experimental Farms.

#### Bhadgaon Farm.

18. The annual reports have been distributed. The Bhadgaon Farm was visited by Mr. Ozanne in November and February and by myself in April.

Mr. Stormont after a long spell of very bad health had to go on leave in February and subsequently died. Mr. Dádina acted for him during a large part of the year very efficiently. At present Mr. P. R. Mehta, M.R.A.C., is officiating.

The season was specially favourable to the rabi. In the non-experimental area 437 acres were cropped at a cost of Rs. 4,360, and the value of the produce was Rs. 6,800. The cost of cultivation was Rs. 9-15 per acre as against Rs. 10-1 last year and the outturn Rs. 15-8 as against Rs. 14. The result was very creditable to the Acting Superintendent, Mr. Dádina.

#### Cotton.

19. The exotic cotton curiously enough yielded better than the indigenous variety. The yield of the latter was by no means first rate, *viz.* worth only Rs. 10-8 per acre, while that of the exotic was worth Rs. 15. In the face of these facts it seems questionable whether the utter unsuitability of the exotic variety to Khándesh is as clearly established as was at first believed. The merit of intersowing cotton with tur was again tested, within the experimental plots on a small scale and on the general area on a large scale. The results confirmed last year's conclusions as to the Dhárwár cotton, but with the local variety intersown cotton showed a distinctly inferior yield.

**Wheat.**

This is the fourth year of these experiments. The Lois Weedon wheat yielded far better than either the continuous or rotation. The following table shows the results for four years on dry crop wheat. The results in the duplicate plots as exhibited in the farm report are so regular that they may, I think, be accepted with great confidence :—

| Description of culture. | 1884-85. | | 1885-86. | | 1886-87. | | 1887-88. | | Total for four years. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Grain. | Straw. | Grain. | Straw. | Grain. | Straw. | Grain. | Straw. | Grain. | Straw. |
| | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. |
| Lois Weedon wheat ... ... | 615 | 650 | 550 | 805 | 567 | 820 | 1,635 | 2,144 | 3,367 | 4,419 |
| Continuous wheat ... ... | 800 | 1,210 | 540 | 1,229 | 502 | 945 | 937 | 1,767 | 2,779 | 5,151 |
| Wheat in rotation ... ... | 956 | 1,962 | 667 | 1,311 | 395 | 725 | 1,107 | 2,125 | 3,125 | 6,123 |

The experiment is now to be conducted on a far larger scale in order to remove any doubt that may remain as to the practical remunerativeness of the system.

Lois Weedon wheat wins also in the irrigated plots ; but this is only the second year of experiment and the yield of continuous wheat is abnormally low in a good year. I therefore consider it premature to make inferences in favour of the system as applied to irrigated wheat.

Colour and consistency of wheat.

The soft wheats again showed a sure tendency to harden and the white wheats to turn in colour. The soft white Jabalpur again gave far the best yield as a dry crop wheat, but in irrigated wheat the hard red took first place.

Jowári.

The only experiment was on the effect of intersowing the crop with pulse, a very common local practice. It is premature to draw final inferences. This year the pulse crop was very poor but the jowári was very good. It is by no means improbable that the jowári was improved by this method of culture, as there are other reasons for believing that the crop does well when sown at wider intervals than usual. But the value of the crops combined was decidedly less than in fields sown with jowári alone.

Arrowroot.

*Arrowroot* yielded very well. A plot of 8 gunthás was planted and yielded at the rate of 5,000 lbs. of tubers per acre. The value calculated at the rate actually fetched by a maund of tubers sold was Rs. 93 per acre and the cost of cultivation only 70, showing a profit of over Rs. 20 an acre. There can be little doubt that had the whole yield been converted into starch it would have been worth far more. At any rate a case has been made for the further development of this crop where irrigation is available even in a dry climate like that of Khándesh. Practical success has been attained in the naturally moist regions of the gháts.

*Ensilage* has again proved a most satisfactory fodder and through it we were able to maintain the cattle in excellent condition.

Cattle.

The Mysore herd is doing excellently. Sales have not yet begun on a large scale ; but it may be mentioned that the demand is good. And since the issue of the farm report I have disposed of a pair bullocks at Rs. 100 a piece and have no doubt that very handsome sums will be realised before long.

Sheep.

The flock of sheep was sold off for Rs. 470. It was not doing well at the farm and it was proved that sheep-breeding to be a success must be re-started on another plan and in different conditions. A scheme has been placed before Government.

Machinery.

The steam thresher was very successful on the farm, its straw-bruising arrangements having been brought to great perfection.

**The Sind Farm (Hyderabad.)**

20. Mr. Strachan was in charge during the year and visited the Shikárpur implement show upon which he submitted a full report.

The general area of 39 acres and 27 gunthas was cropped at a cost of Rs. 2,416. The crops were worth Rs. 2,653. The experimental area was 15 acres and 24 gunthas and its cost of cultivation Rs. 708-12-2, while the yield was worth Rs. 736-8-8. On the whole the result was an improvement compared with last year. The paying crop was the lucerne, the others all showing a trifling margin of profit or loss.

The Economic Garden being no longer under the charge of the Farm Superintendent measures are being taken to reduce the establishment in charge of the farm, and proposals for this purpose have been made to Government. This year including the share of Superintendent's and Assistant Superintendent's pay debitable to the farm and debiting a fair value of permanent improvements and all other items of incidental expenditure the farm cost Rs. 4,328. The two farms of Hyderabad and Bhadgaon cost Rs. 8,700 in the present year as against Rs. 11,000 last year. A great part of this decrease is due to savings in the pay of the Bhadgaon Superintendent, but both farms were worked with better profit than last year.

21. It is impossible to report much improvement in the variety or manner of conducting the experiments on the Sind farm.

**Selection of Seed.**

These experiments are in their thirteenth year :—

| Bájri. | 1883-84. | 1884-85. | 1885-86. | 1886-87. | 1887-88. |
|---|---|---|---|---|---|
| | Grain. | Grain. | Grain. | Grain. | Grain. |
| No. I. selected ... ... ... | 1,527 | 922 | 1,710 | 1,730 | 2,570 |
| „ III. „ ... ... ... | 1,282 | 947 | 2,308 | 1,305 | 2,075 |
| „ IV. „ ... ... ... | 1,307 | 995 | 1,574 | 1,200 | 2,240 |
| Mixed ... ... ... ... | 1,765 | 1,085 | 2,144 | 1,135 | 1,745 |
| Bearded bájri... ... ... ... | 1,510 | 815 | 1,615 | 1,580 | 2,530 |
| Bázár seed ... ... ... ... | ... | 642 | 1,562 | 885 | 1,750 |

The bájri selection experiment appears on the old lines owing to the cultivation having taken place before the appearance of Mr. Ozanne's remark of last year (paragraph 17, sub-paragraph 5).

The experiments from different parts of the spike were continued with the result, *viz.* that the largest grain yield was got from the lowest part of the spike, whereas last year this part gave the smallest yield. In other points the middle portion retained its superiority of last year, in point of straw, over the lower part, and in both grain and straw, over the upper part and seed from the whole spike.

The selection of seed cotton shows a somewhat disappointing result this year. The farm seed has yet to win its battle as regards abundance of yield, but in quality it already stands first in the local market.

The experiments with pods with different number of cells give irregular results owing to the bad season, but they apparently show that in imported varieties the four-celled pods give the largest yield and the greatest percentage of pods in all varieties are four-celled. In native cotton the three-celled was the dominant variety but the unselected gives the largest yield and the five-celled comes next to it. These experiments are no doubt worth continuing.

Some experiments were begun to test the yields from the different methods of sowing prevailing in different parts of Sind. Broadcasting gave decidedly the best yield this year.

**Wheat.**

*Lois Weedon experiments.*—No superiority is yet shown in the yield of the Lois Weedon plots, but the results were spoilt by ravages of rats and cannot be relied on. Several different varieties of Indian wheat were sown on the farm. The best yielders were Bakshi (Bombay irrigated hard white), Popri, a Sindi soft white wheat, and then Bombay Násik hard white. The Australian wheat this year yielded poorly.

Other experiments are duly recorded in the farm report.

Barilla this year proved useful and the bábhul plantation has been devoloped.

**The Nadiád Farm.**

22. The experimental results have been reviewed and submitted with the Committee's report to Government. The net result of the operations of the farm was a yield of Rs. 27-5-4 per acre against an expenditure of Rs. 34-14-3 per acre, a tolerably good result for a purely experimental farm. The accounts do not appear to be thoroughly well kept in the farms prescribed by Government. The Committee's he-buffaloes are reported specially efficient in deep ploughing and won the prize at the Rájkot show. The financial condition of the Committee is flourishing and its pamphlet as widely circulated as ever. The six local scholarships are to be consolidated into one and the scholarship at the Poona College of Science is to be discontinued. It has been suggested that it would be advisable to devote the funds thus made available to the foundation of a second scholarship at the Bombay Veterinary College. The seed depôt has not answered the Committee's expectations and the Committee seem much discouraged. But the loss is decidedly less than last year.

The fresh experiments of the year were with barilla, mahogany, divi-divi and date-palm seed. The two latter experiments promise well, the barilla has thriven but does not seed. The mahogany seed has failed.

**Poona Farm.**

23. On the 30th April the Assistant Superintendent took charge of the farm at Poona formerly attached to the College of Science as well as of the ground formerly owned by the Botanical Gardens at Ganesh Khind and of some 149 acres of land for the growth of monsoon fodder crops and development of pasture belonging to the Kirkee Cantonment. The intention is to utilise these lands for the furtherance of agricultural experiments and improvement of cattle, principally milch. In the meantime the land on the area originally worked by the College of Science has been taken in hand. The silo has been filled with green fodder and the remainder of the regularly tilled area has been cropped with tág (Crotalaria juncea) followed by wheat and jowári with a view to equalisation of a somewhat irregular soil and thus fitting it for purposes of comparative experiment. The farm will be of special value in this respect coming as it will under the eye of the proposed agricultural chemist when he takes his three months' course at the Poona College of Science. The extension of mango cultivation has also been vigorously pushed at Ganesh Khind, thanks to the invaluable and hearty co-operation of Mr. G. M. Woodrow, whose skill in the art of mango grafting is well known. Steps are now being taken under his directions to procure cuttings from all the most celebrated trees in the neighbourhood, and the success of the crown grafts under the shelter of pot coverings has been most gratifying. My cordial acknowledgments are due to Mr. Woodrow for the assistance which he has extended to me so ungrudgingly both in this matter and with reference to the management of the College of Science farm which was formerly under him.

*B.—Experiments on various Indigenous and Exotic Products.*

**1. Wheat.**

Distribution of seed wheat.

24. Selected seed was again distributed in Thar and Párkar, but apparently with little success owing to late sowing. Government sanctioned a grant of Rs. 1,000 in September, but the Karáchi Chamber of Commerce was not able to furnish the seed till December. Notwithstanding this unfortunate delay 312 Zamindárs sowed 135 acres with 169 maunds. The yield was only twofold.

On the other hand a fourfold yield was obtained from the seed of the previous crop in spite of damage from a storm in March. The last year's seed, of course, was sown in time, and, as has been specially noticed by the Deputy Commissioner, Thar and Párkar, early sowing is essential to the success of this variety. Sanction has again been requested for another Rs. 1,000, but owing to information regarding this experiment having reached this office only recently, I am not aware whether it has been accorded. Last year's experience seems to show that it is too late to grant it now and I think, after the amount of success already attained, the Zamindárs might be content with the seed obtained from their crops.

Owing to their utter failure previously English wheats were not tried. Australian wheats were again tried on the Sind farm, but yielded poorly. Again, however, the cause was late sowing. But it is questionable whether there is any use in attempting the growth of foreign wheats. The Indian varieties supply ample material for improvement.

Steam Wheat Threshers.

25. Full arrangements were made for a competitive trial of the machines of two well-known firms, Messrs. Ransome, Sims and Jefferies, and Messrs. Marshall, Sons and Company, at the Shikárpur show. But it fell through owing to non-appearance of any agents or machines belonging to the firms. This is much to be regretted since the extension of steam machinery means the spread of clean wheat. The Marshall steam thresher has been highly satisfactory at Bhadgaon. Particularly admirable are the arrangements for straw bruising which give a "bhusa" as fine and smooth as can be desired. At Bhadgaon also the country libel on the germinating powers of machine-threshed grain has been triumphantly demonstrated to be utterly false, by means of excellent crops grown from machine-threshed seed.

Adulteration of wheat.

26. The agitation regarding refraction and adulteration has been making progress. In April last at the instance of the principal wheat trading firms the Bombay Chamber of Commerce adopted the following resolutions:

I. That the refraction on "choice" and No. 1 club wheat shipped to Liverpool shall be fixed at not over 2 per cent.

II. That the admixture shall not exceed in "choice" 6 per cent. of other than soft white and in No. 1, 13 per cent. of other than soft white.

III. That a copy of the resolutions passed to-day be sent to the London Corn Trade Association by the Chamber, adding that as shippers are anxious to improve the quality of Indian wheat they hope the London Association will be willing to limit the refraction on Bombay wheat to 2 per cent.

The London Association, however, refused to adopt the Chamber's recommendations. But the Liverpool Chamber not only adopted them but actually proposed greater stringency regarding the admixture of wheat other than soft white by reducing that in "choice" to 5 per cent. As the Chamber remarks it is impossible to say as yet that any tangible influence has been produced upon the trade. But even this reform will act as some encouragement to the cleaning of wheat for export. But it must be feared that as long as there exist influential firms in England willing to import dirty wheat, there will be firms in Bombay willing to buy it from up-country for export. The above reform also scarcely affects this Presidency, the Bombay wheats exported being principally red, and those to which the reform applies being soft white. To encourage the Bombay trade a more general crusade against high refractions is indispensable. Experienced authorities in this Presidency do not hesitate to recommend penal legislation. It is to be hoped that the trade by moving further in the direction they have taken during the past year will obviate the necessity for so heroic a measure. The future of the Indian cultivator depends so largely on the development of the export wheat trade that he deserves every assistance from Government.

Trade.

27. The prospects of this export trade are certainly not very encouraging. During the year under report the area and outturn of local wheat was larger than average, exchange was

low and freight no higher, but the exports show a very slight increase. The figures unluckily do not discriminate between local wheat and wheat of other Presidencies. The following figures from the Chamber of Commerce returns are taken for the months of April to September, from which date last rabi crop gets fairly into the market :—

| Years. | Imports (From other parts of the Presidency into Bombay.) | Foreign Exports (From Bombay.) |
|---|---|---|
| | Tons. | Tons. |
| 1886 ... ... | 99,916 | 376,505 |
| 1887 ... ... | 48,730 | 332,785 |
| 1888 ... ... | 69,952 | 339,205 |

We find that the imports from other parts of the Presidency into Bombay are 43 per cent. better than last year, though they are still 30 per cent. worse than the year before. The exports including the wheat from other Presidencies are about the same as last year. The conclusion seems probable that exports of Bombay wheat are increasing. It should especially be noted that the imports of the Southern Marátha Country wheat into Bombay have again increased with the development of the railway system. The opening of the Marmagoa portion of the Railway has resulted in a very large increase of imports by sea. On the whole the increase by rail direct and by rail and sea amounts to 5 per cent. The connection of Marmagoa with the Southern Marátha Railway system has naturally diverted a considerable traffic to that port.

The following table for the four years ending 1887 is interesting, but reveals a deplorable retrocession of India from the rank it was taking among the countries which supplemented the wheat growth of Great Britain. No effort should be spared to enable us to resume and improve on our previous position :—

*Sources of Wheat Supply to England.*

| | 1884 Cwt. | Per-centage. | 1885 Cwt. | Per-centage. | 1886 Cwt. | Per-centage. | 1887 Cwt. | Per-centage. |
|---|---|---|---|---|---|---|---|---|
| From the United States ... | 32,946,677 | 53·0 | 36,007,187 | 46·7 | 36,094,420 | 58·7 | 45,377,969 | 61·4 |
| ,, British North America ... | 2,446,331 | 4·0 | 2,026,021 | 2·6 | 3,851,494 | 6·2 | 4,923,657 | 6·7 |
| ,, Australia ... ... ... | 4,897,766 | 7·8 | 5,279,230 | 6·8 | 738,699 | 1·2 | 1,347,151 | 1·8 |
| ,, Russia ... ... ... | 5,401,964 | 8·6 | 11,986,359 | 15·5 | 3,710,099 | 5·9 | 5,522,773 | 7·5 |
| ,, Egypt ... ... ... | 999,578 | 1·6 | 109,983 | 0·1 | 40,632 | Nil. | 197,787 | 0·3 |
| ,, India ... ... ... | 8,009,909 | 12·9 | 12,101,963 | 15·7 | 11,028,665 | 17·6 | 8,509,095 | 11·5 |
| ,, Other Countries ... ... | 7,515,291 | 12·1 | 9,778,250 | 12·6 | 6,679,567 | 10·4 | 7,962,798 | 10·8 |
| Total ... | 62,217,516 | 100· | 77,288,993 | 100· | 62,143,576 | 100· | 73,841,230 | 100· |

## 2. Cotton.

28. In 1886-87 the second crop was taken of the newly imported American cotton and the seed 9,689 lbs. resulting was collected and distributed among villages of Dhárwár and Bijápur as described in last year's report. The crop of exotic cotton in the Southern Marátha Country everywhere suffered from blight or excess of rain. But Mr. Price, the officer on special duty, considers that the newly imported seed suffered less than the old. The results of general observation, in the villages to which the seed was distributed, are confirmed by the behaviour of the seed sown in the Dhárwár Jail, the Superintendent of which writes as follows :—"The plants were remarkably large and healthy. They were, however, attacked with blight after they came into flower, the later pickings of cotton were consequently unsatisfactory." Supposing a twenty-five fold yield of seed from the crop of 1887-88 there will be 24,000 lbs. for sowing this season (since exotic seed is almost entirely reserved for this purpose) and the area sown

with the new seed will, therefore, be considerable. Cotton also has had a good start this year, so that the materials for judging the crop next season should be unusually good. The seed was tried at the Bhadgaon Farm in 10½ acres but did not do well, though longer acclimatized Dhárwár-American did better than usual.

The Kaira seed obtained from Messrs. Sugden & Co. was tried on the College of Science Farm, Poona, but failed. Mr. Sugden has died and his company is dissolved, so that the experiment cannot be pushed any further.

**Saw-gins.**

29. The ginning factory in Dhárwár has succeeded better financially this year than last, and Mr. Spence, the Collector, reports that other factories are springing up and that hand-ginning is sure to decline. There is no chance, and under the above circumstances no need, of the Local Board or any other public body taking up the factory, when it is closed in August next. But it is permissible to hope that it may be advantageously disposed of to some private company or individual. Whether saw-gins will or will not succeed in the Southern Marátha Country, there seems to be no doubt they are not liked in Sind. In spite of the favour with which they were received last year at Shikárpur further trial seems to show that they are unsuited to the indigenous cotton of Sind. Macarthy ginned cotton sells at Rs. 1-4 per maund higher than saw-ginned and the merchants who were eager to get their cotton saw-ginned at the farm—owing to the unfavourable results of their sales—had to beg a reduction in the ginning charges. Two objections are raised in Karáchi. The fibre is cut (but this is not admitted by the Farm Superintendent) and cotton is so opened that it cannot be compressed in sufficient quantity into a bale of the prescribed dimensions.

The following details regarding ginning machines are interesting as indicating the extent to which steam and hand-gins are patronized. In 1886-87 out of 1,529 gins 252 were steam gins but almost all these were used in Gujarát (including States) and the Deccan :—

| Province. | Worked by | | Total. |
|---|---|---|---|
| | Hand. | Steam. | |
| Gujarát ... ... | ... | 63 | 63 |
| Gujarát States ... | ... | 128 | 128 |
| Deccan ... ... | ... | 22 | 22 |
| Karnátak ... ... | 763 | 36 | 799 |
| Southern Marátha Country States ... | 269* | ... | 269 |
| Sind ... ... ... | 245† | 3 | 248 |
| Total ... | 1,277 | 252 | 1,529 |

* Two by bullock power.
† One by horse power.

**Forecasts.**

30. The forecasts of wheat and cotton cultivation have been furnished with punctual regularity. The question of an earlier submission of the cotton forecast was started by the Chamber of Commerce, but the impracticability for this Presidency was shown in a report to Government. The necessity for punctual submission of these returns by District Officers must be borne in mind. When sowing is retarded some delay in submission is inevitable. But care is necessary to avoid unpunctuality from preventible causes. It must not be forgotten then that these forecasts are sources of important information to the mercantile community. The following figures will be to some extent a gauge of their correctness in British territory :—

*Comparative Statement for the year 1887-88.*

| No. | District. | Cotton. | | Wheat. | |
|---|---|---|---|---|---|
| | | Actual areas under crop as specified in Agricultural returns. | Areas as per Forecast returns. | Actual areas under crop as specified in Agricultural returns. | Areas as per Forecast returns. |
| | *I.—Gujarát.* | Acres. | Acres. | Acres. | Acres. |
| 1 | Ahmadabad ... ... ... | 425,109 | 405,592 | 190,340 | 165,264 |
| 2 | Kaira ... ... ... | 9,545 | 10,143 | 26,791 | 28,516 |
| 3 | Panch Maháls ... ... | 355 | 575 | 17,849 | 18,484 |
| 4 | Broach ... ... ... | 246,668 | 251,769 | 66,204 | 70,801 |
| 5 | Surat ... ... ... | 97,520 | 98,257 | 33,130 | 33,563 |
| | Total ... | 779,197 | 766,336 | 334,314 | 316,628 |
| | *II.—Deccan.* | | | | |
| 6 | Khándesh ... ... ... | 918,791 | 923,970 | 398,594 | 395,738 |
| 7 | Násik ... ... ... | 23,039 | 22,513 | 376,924 | 379,772 |
| 8 | Ahmadnagar ... ... | 30,900 | 30,298 | 283,965 | 284,999 |
| 9 | Poona ... ... ... | 1,150 | 1,149 | 124,733 | 126,899 |
| 10 | Sholápur ... ... ... | 8,245 | 8,413 | 58,761 | 58,464 |
| 11 | Sátára ... ... ... | 12,693 | 12,478 | 67,715 | 65,856 |
| | Total ... | 994,818 | 998,821 | 1,310,692 | 1,311,728 |
| | *III.—Karnátak.* | | | | |
| 12 | Belgaum ... ... ... | 186,533 | 187,893 | 112,796 | 111,269 |
| 13 | Bijápur ... ... ... | 375,625 | 360,703 | 185,214 | 176,275 |
| 14 | Dhárwár ... ... ... | 479,940 | 469,791 | 266,179 | 263,943 |
| | Total ... | 1,042,098 | 1,018,387 | 564,189 | 551,487 |
| | *Sind.* | | | | |
| 15 | Karáchi ... ... ... | 748 | 978 | 30,582 | 32,390 |
| 16 | Hyderabad ... ... ... | 45,511 | 38,060 | 30,894 | 32,240 |
| 17 | Shikárpur ... ... ... | 7,142 | 8,129 | 127,230 | 143,290 |
| 18 | Upper Sind Frontier ... ... | 476 | 2,278 | 12,176 | 34,472 |
| 19 | Thar and Párkar ... ... | ... | 4,163 | ... | 18,084 |
| | Total ... | 53,877 | 53,608 | 200,882 | 260,476 |
| | Grand Total ... | 2,869,990 | 2,837,152 | 2,410,077 | 2,440,319 |

It will be observed that the areas specified in the forecasts and in the Agricultural returns correspond pretty closely. The Agricultural returns cannot yet pretend to minute accuracy, but they are sufficiently near the mark to make a forecast which turns out to correspond so nearly with them, of considerable practical value.

### 3. Tobacco.

31. Adverse seasons have put a most unfortunate obstacle in the way of attempts to push the cultivation of improved tobacco. The Honourable Bechardás Veharidás reduced his cultivation of the superior West Indian varieties last season from 75 acres to 50, and the yield was so inferior that he did not think it worth while to send samples of the tobacco after curing. These samples were required for analysis with a view to discover the alleged defects in curing, and to decide on the advisability of bringing an expert from America to introduce improved methods. This season Mr. Bechardás has only an acre under tobacco and prospects are very gloomy. It is not to be hoped, therefore, that any samples will be obtainable during the year, though Mr. Bechardás promises to prosecute his inquiries. In the meantime also Mr. Bechardás has ceased his con-

nection with the shop and factory in Bombay, which is now carried on by the workmen he originally entertained. It is to be hoped that better success will await Mr. Bechardás in his spirited enterprise next year.

A small quantity of Virginian and Havanna seed was supplied by the kindness of the Honourable Bechardás to the Superintendent, Experimental Farm, Hyderabad, Deccan, who will be asked to furnish information regarding any experiments he has initiated.

**4. Arrowroot.**

32. The crop on the Poona Farm yielded very poorly, the expected outturn of 12 tons dwindling down to less than one. The result is attributed to a want of manure. But the yield at Bhadgaon and Dápoli where the plant was moderately manured seems to show that this is not the real reason for the failure. At Bhadgaon the yield was 5,000 lbs. of tubers per acre, equivalent probably to 555 lbs. of starch.

The actual profit recorded in the cultivation returns was Rs. 23 per acre.

Mr. Gogte has continued his experiments most successfully in Dápoli. Beginning seven years ago with only 27 lbs. of seed, he now cultivates 12 acres and got last year over 1,000 lbs. of starch per acre. This he reckons gives a profit of Rs. 40 per acre.

The Gondal State, on the other hand, reckons that it obtained 1,400 lbs. of starch per acre. The quality of the starch produced was pronounced in analysis to be in every way equal to the best Maranta. The cost of cultivation in Gondal was put roughly at Rs. 170 per acre and the profit at Rs. 180.

**5. Manilla Tamarind.**

33. A gratifying success has attended the experiments with this plant. After a somewhat discouraging beginning in Ahmadabad in 1884 fresh seed was obtained and some seedlings were grown in a nursery at Sánand. Sixty-four of these after careful transplantation into holes filled with manure have succeeded well as road-side trees. From the Karáchi Municipal garden, Jerruck and Sháhbandar there are good accounts. In Sehwan alone most of the plants failed.

**6. Divi-Divi.**

34. The cultivation of this tree is being extended in the Southern Division. The gatherings of last year's produce amounted to only 20 cwts.

The crop at Bhadgaon amounted to 1 ton and 8 cwts. of which one ton was taken over by a Bombay firm for Rs. 60.

**7. Date-Palm.**

35. In spite of unsuccessful experiment at Bhadgaon and Poona, on the Government of India expressing its approval of the propagation of date-palms from seed, instead of suckers, the Bombay Government ordered twenty pounds of seed from the Botanical Gardens, Saharanpur. They were distributed to the Collectors of Poona, Sholápur, Násik, Bijápur, Dhárwár, Thána and Surat, the Conservators of Forests, N.C. and S. C., to the Porbandar and Gondal States and several native gentlemen. There are considerable complaints regarding the seed being weeviled. But the sound seed seems to have germinated well, and the plants so far to have done well.

*Preventives against the attacks of weevil upon corn and grain.*

36. Experimments were made upon the effects of bisulphide of carbon in preventing the infestment of grain at the Bhadgaon Farm by Mr. P. R. Mehta, and in Bijápur by Mr. Price. The results are not sufficiently uniform to make it advisable to report them. The experiment will be repeated this year. Mr. Woodrow found sulphurous acid a most efficient disinfectant of weevil, and the gram thus treated proved perfectly wholesome and palatable to the animals fed with it.

**Ensilage.**

37. Besides at Bhadgaon as already noticed extensive use was again made of ensilage at Gondal in Káthiáwár. The results seem to be successful and the farm stock improved and fattened on the silage. The pit silo on the Poona

farm now handed over to the Agricultural Department has been filled with over 4,600 jowári bundles being got from 4 acres and 11 gunthás. The success will be reported next year. Beyond this the Agricultural Department has not yet been able to go in the way of experiments upon ensilage but a detailed scheme awaits the sanction of Government.

**Improved Agricultural Implements.**

38. Several chaff-cutters, and Messrs. Fleming and Company's iron ploughs, and three-pronged adjustable grubbers, with or without mould board on the middle prong, were exhibited at Shikárpur and apparently approved of by the rayats.

Mr. Navroji M. Bamonji continued working his sugar mills in Surat, but the result was a disappointing failure. The objections alleged are manifold but apparently trivial. The real one at the bottom of them all is that the draught of the machine is too heavy for a single pair of bullocks. Mr. Navroji sent the mills to Bhadgaon where they have been hired out to the surrounding cultivators. Mr. Woodrow's bark-opener, and graft-protector, two ingenious implements for rind-grafting, have appeared during the year and are described by him in the list submitted to the Government of India.

*C—Agricultural and Cattle Shows.*

39. The principal shows of the year were :—

| Province. | Place. | Date. | Prize Money. | Contributions. |
|---|---|---|---|---|
| | | | Rs. | |
| Deccan ... ... | Ahmadnagar ... | 2nd and 3rd November 1887. | 1,246 | Government Rs. 600; Local Fund contribution Rs. 300. |
| Káthiáwár ... | Rájkot ... ... | 3rd November 1887. | 1,397 | Government Rs. 600; Káthiáwár Chiefs Rs. 1,500; Local Fund contribution Rs. 750. |
| Sind ... ... | Shikárpur ... | 6th to 11th January 1888. | 4,250 | Government Rs. 1,000. |
| S. M. Country ... | Chinchli... ... | 2nd to 4th February 1888. | 4,434 | Kolhápur and Southern Marátha Country Chiefs and Sátárá Jághirdárs. |
| Káthiáwár ... | Dhrángadhra ... | March... ... | 385 | Not given. |
| | Wadhwán ... | Do. ... ... | 557 | |
| | Vánkáner ... | Do. ... ... | 320 | |
| | Songad ... | Do. ... ... | 880 | |
| | Junágad ... | Do. ... ... | Not given. | |

*Ahmadnagar Show.*—In Nagar the prize money shrank by Rs. 950. Rs. 560 were given to horses and the number of exhibits was maintained in spite of the fact that the competition was restricted to animals belonging to the district. The leading features of the horse show were the popularity of the Norfolk Trotter stock and the mules together with the disappointing exhibits in branded mares and ponies.

The cattle were very poor. The prize list shrank from Rs. 430 to Rs. 222, in great measure owing to the necessity of refusing prizes to the inferior exhibits under many classes. The grain and seed exhibits were excellent especially "bakshi" wheat, bájri, gram and rice. Cotton was poor, and the attempt to exhibit articles of local manufacture was again a failure.

40. *Rájkot Show.*—Up to the present year purely a Horse Show, had cattle and sheep added for the first time. The remount class and broodmares and other stock excepting three and four-year old produce of Government stallions was fairly good. The cattle classes although few in number contained some fine animals. The reason assigned for their paucity is the holding of the show during the season of agricultural operations, but another probable reason is the

smallness of the prizes compared with those offered for horses. Rs. 1,397 were given in prizes besides 44 diplomas presented to the Darbárs. The Chiefs subscribed liberally and the show seems to have been a success.

41. *Shikárpur Show.*—The number of animals actually exhibited for prizes was 619 against 936 of last year. The decrease was due partly to the elimination of some classes of animals that were admitted last year and partly owing to the fact that within three weeks after this a show was held for the first time at Jacobabad, only 25 miles distant, to which doubtless were sent many animals that would otherwise have come to Shikárpur. In quality, however, the exhibits were fully on a par with those of last year. The broodmares and mules were especially good. 283 prizes amounting to Rs. 4,250 were distributed this year as against 523 worth Rs. 5,577 in 1887. Forty-eight remounts were purchased for the Police and Native Cavalry at an average cost of Rs. 198 each, and it is said there were also animals fit for British Cavalry and Artillery but no one to purchase them.

An exhibition of agricultural machinery was held, as last year, in connection with this show. The machinery was exhibited in three classes—(1) steam, (2) bullock or horse, and (3) hand-power machinery. Under the first class were shown three flour mills, of which only one did fair work. The second class included several fodder cutters, thrashers and saws, a water-lift, an oil-mill and a Bihia mill with evaporating pan. Of the several fodder cutters exhibited the one manufactured by Messrs W. Hunt and Co. of Essex, England, and sent by Messrs. Fleming and Co. of Bombay, worked very satisfactorily with a pair of bullocks and three men, chopping per hour 729 lbs. of the strongst juár straw, 11 feet long and 1 inch in diameter. The bullock thrashers as last year were not approved. The circular saw worked fairly well. The Burgess Brentwood water-lift was admired for its simplicity and efficiency. The draught is calculated at 63 lbs. and a single bullock lifted and discharged water from a well 23 feet deep at the rate of 72 cubic feet or 450 gallons per hour. The stream also is superior to that of the Persian wheel and in spite of a somewhat high price may obtain purchasers. The Mistry oil-mill gave very poor results on trial. The Bihia sugar-mill was again most successful. The evaporator turned out 40 lbs. of jágery in 2 hours and 5 minutes at a cost of 10 annas, including fuel (1 maund). Of the hand-power machines the gram crusher is the best—the others are too heavy for men to work. The Burgess Emery saw-gin though an efficient machine was not worked. It has an improvement termed a condenser which dispenses with the cotton chamber and it seems one likely to suit the cultivator, being capable of improvements which will remove the objections to saw-ginned indigenous cotton in Sind.

The ploughs and cultivators exhibited by the Collector of Shikárpur found great favour on account of their lightness and strength.

It is a pity that exhibiting firms do not send agents to be present at trials. Their absence on the present occasion prevented many of the most interesting machines being worked.

42. *The Chinchli Show and Fair* were again brilliantly successful, the number of animals present as exhibits and the amount of prize money as shown in the margin being larger than those on any previous occasion. The show was opened by His Excellency the Governor, who gave a prize of Rs. 100 for the best broodmare from Poona district and this year gives a similar sum for the best Deccan ox. Some fine cattle were exhibited, and if the example of giving handsome prizes for cattle be followed, no doubt there will be a greater emulation in this respect. The circulation of the pamphlet on cattle-disease is alluded to elsewhere. The number of exhibits in agricultural produce has recovered and was very creditable. Among the horses one-third of the prize-money was taken by exhibitors from British districts. Classes for mules and donkeys were instituted and a prize of Rs. 75 given for the best native cavalry remount.

| | Present. | Exhibited. | Prize Money. |
|---|---|---|---|
| Horses ... ... .. | 1,621 | 172 | 2,656 |
| Oxen ... ... ... | 12,983 | 366 | 1,307 |
| Buffaloes.. ... ... | 2,598 | 22 | |
| Agricultural implements or produce ... ... | ... | 564 | 471 |

43. *Káthiáwár Shows.*—The different States of Káthiáwár inaugurated local shows this year, details of which are given in the accompanying table :—

| Place. | Horses and Mares. | Cattle and other animals. | Prize Money. | Diplomas. |
|---|---|---|---|---|
| | | | Rs. | |
| Dhrángadhra ... ... ... | 136 | 579 | 385 | 32 |
| Wadhwán ... ... ... | 75 | 176 | 557 | 41 |
| Vánkáner ... ... ... | 221 | 510 | 320 | 28 |
| Songad ... ... ... | 266 | 430 | 880 | 77 |

At Wadhwán and Vánkáner were shown exhibits of agricultural produce and implements together with specimens of local industry. The show at Songad managed by Colonel Nutt was most successful and attended by 15,000 people. The arrangements comprised not only all the necessaries of a fair but a scheme of lectures on agricultural subjects. A considerable sum was given in awards for dairy and other agricultural produce. It is to be hoped that these shows will be kept up as they will without doubt afford an excellent stimulus to agricultural improvement as well as to horse-breeding. I make no special remarks regarding the Ahmadabad and Jacobabad shows, as they were horse shows pure and simple, but I have ventured to state some general conclusions to be drawn from the facts which have come to light at these shows.

44. It would perhaps be an improvement if the suggestions of the Agricultural Department were taken regarding the prospectus of these shows and if the Department were allowed to express its opinion on the reports before they are finally reviewed by Government. There are certain particulars which should always be obtained at all horse shows, *viz.* sires of prize-winners and generally the sires producing the best-looking stock. In the Ahmadnagar show Dr. Gaye noticed the absence of a market for mules. In the Ahmadabad show Mr. Adams remarked that no police remounts were purchased. The numbers obtained at other shows were also insignificant. Special steps should certainly be taken to remedy this defect. Great care should be taken in the first place that every show be also a fair and at a locality where such fairs are usually held. It will increase the number of exhibits and popularise the institution—witness more especially Chinchli. I might mention Mamdápur in Ahmadnagar and Belavdi táluka Karád in Sátára for instance as good places for cattle if not for horse shows. Mr. Vincent of Ahmadnagar noticed that although the pony class at the show was poor there were good animals to be got in the district. If there were good prospects of sale at the shows these animals would have appeared. It is worthy of consideration by Government whether at any rate both for native cavalry and police, agents should not always be present at shows on behalf of the different regiments to buy.

At the Ahmadnagar show the gelding classes and colts up to four and five years old were very poor. In Rajkot also yearlings were good and two-year olds fair, but three-year olds are classed as a bad lot "no use for remounts or anything else". This is one of the many indications of the truth of the theory that the rayat will not keep his good colt up to a mature age. Government must go into the market and buy early.

The alleged unpopularity of the Norfolk Trotter stock seems to be contradicted by the admiration accorded to their produce in Ahmadnagar, while the absence of these stallions in Káthiáwár called forth some pertinent remarks from the General Superintendent, Horse-breeding Operations, who concludes that the exclusive use of Arab and thoroughbred stallions is the cause of there being no remounts at this show suitable for Native or British cavalry or artillery, notwithstanding the fact that Government has supplied Káthiáwár with stallions for forty years. It would certainly not be unreasonable for Government, if it continues its liberality to Native States in the matter of stallions to insist on the States using sires of a stamp that will get produce useful for Government purposes.

## VI.—CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

### Cattle-Diseases.

45. The only reported outbreaks of disease were from Sholápur, Poona College of Science Farm, and in Bombay among the Commissariat cattle. That disease was only confined to those localities is hardly probable.

In all the above cases investigation was possible. At Poona and Bombay there was skilled veterinary aid; in the Sholápur Collectorate assistance was given by senior students sent from the Bombay Veterinary College.

The outbreaks were found to consist of rinderpest and foot and mouth disease. Two cases of malignant œdema were treated. Cases of anthrax were reported as observed at Medsingi and Manjri, two villages in Sholápur district, while a disease named *kirral*, locally believed to be caused by insects in the kadbi, but with symptoms like hoven, was also observed by one of the inspecting students.

### *Rinderpest.*

46. The following table shows the essential particulars about its appearance and disappearance:—

| District and Táluka. | Number of Villages. | | When appeared. | When disappeared. | Remarks. |
|---|---|---|---|---|---|
| | Affected. | Visited by Inspectors. | | | |
| *Sholápur.* | | | | | |
| 1. Sholápur ... | Whole táluka. | 30 in the south and south-east. | January ... | End of March. | Appeared in villages between Dongaon and Shirápur. In January and February 75 sheep and goats and 500 head of cattle died at Salgar: 200 in Kundalgaon. In March 10 head of cattle died daily. Mortality considerable, but figures not available. |
| 2. Pandharpur and Sángola. | Do. .. | 32 | February ... | Do. ... | Appeared in February in the tálukás. At Kasgaon 6 cases of death (9th March) in one day out of 25 attacks. Places visited second and third time. Figures not available. |
| 3. Mádha and Karmála. | Do. ... | ... | Do. ... | Early March . | No fresh cases from 1st April. |
| *Poona.* | | | | | |
| Haveli ... ... | Science College Farm, Dhánuri near Yeroda, and Aund near Ganesh Khind. | Science College Farm visited by Mr. Woodrow and Mr. Pottinger Veterinary Surgeon. | 6th December. | 20th December | Particulars about the Science College Farm cattle available: 13 head of cattle died. Attack virulent. 85 cases said to be fatal at Dhánuri near Yeroda, but no official communication received. |

*N.B.*—Foot and mouth disease spread in Sholápur, Sángola and Pandharpur, Mádha and Karmála Tálukás of Sholápur between December and March. But particulars not reported. Information therefore not available.

It is remarkable that it is mentioned as attacking sheep, who seldom, it is believed, fall victims to this disease. The measures adopted by the Inspectors consisted chiefly in (1) isolation by means of hospital pounds; (2) cleaning out cattle sheds; (3) disinfecting refuse with sulphur.

The success of isolation was marked, and aid was given to the Inspectors most willingly in every case. The Collector (Mr. Allen) observes—

"Cattle owners are willing to adopt the prescribed measures and remedies, but Mhárs cannot be prevented from taking and using skins of deceased cattle; some legislation on this point is therefore necessary.

"That the necessity of curative and repressive measures is growing upon the public is proved by the fact that about 200 copies of the Manual have been sold in the district in about two months.

"That the Local Boards be asked to allot a small sum for the purchase of medicines in emergent cases. The amount may be recovered from the owners using them but a small sum is required to begin with."

The outbreak of rinderpest in the Poona farm was reported by Mr. Pottinger, Veterinary Surgeon, Poona College of Science, between 16th December and 10th January last. Nearly all the cases were fatal, and great loss was caused to the farm. Mr. Pottinger ascertained by his inquiries that up to the 27th December there had been about eighty-five fatal cases at Dhánuri near Yeroda and that the disease also had prevailed in the neighbourhood of Poona. Nevertheless no official report had been made. Such an omission is very serious in the neighbourhood of such a populous centre as Poona, crowded as it is moreover with Commissariat and transport cattle.

*Foot and Mouth Disease.*

47. This was also observed in Sholápur, where it seems to exist chronically. The usual treatment was adopted and was no less successful than in the case of rinderpest. This disease is so common that it is not generally reported. This is a great misfortune, since the people merely require to be shown the necessity to isolate their cattle and they do so at once with the best effect.

48. The other instances in which "cattle-disease" of some kind or other prevailed in the Presidency are summarised in the accompanying table taken from the *Government Gazette* (vide Appendix A). It will be observed that it appeared in no less than thirteen districts indifferently in all parts of the Presidency. In the case of Sholápur only was skilled inspection or assistance given. The outbreaks are believed not to have been severe but considerable mortality probably occurred in Gujarát where a large decrease in cattle is shown. The facts point to the urgent necessity of giving skilled assistance in every district. Next April there will be probably at least twenty graduates at the Veterinary College available. Their services ought to be snapped up by the different district Boards at once.

49. A most useful method of disseminating knowledge regarding contagious diseases of cattle and their treatment was inaugurated at the Chinchli show where the copies of translations of Mr. Steel's excellent little Manual were disseminated. The Committee of the Poona Horse Show resolved to follow this good example and succeeded in distributing no less than 275 copies. Two hundred copies of the Manual of last year were also distributed in Sholápur District on the application of cattle-owners.

50. The Bombay Veterinary College continues to succeed admirably. It has eighty-five students of whom twenty-eight are in their three years' course, and the majority of these it is expected will succeed in taking the College diploma. Bombay will then possess the nucleus of a body of experts such as is enjoyed by no other Presidency. It is a matter of urgency to prevent discouragement to the new graduates. Without the stimulus of fixed employment it is to be feared the present excellent record may not be kept up. The affiliation of a staff of Veterinary Inspectors to the Agricultural Department has been discussed. The principle was brought before the Delhi Conference and approved heartily. It is hoped that the time for action notwithstanding the great financial pressure may not be far distant.

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

### *A.—Agricultural.*

51. This year all the returns are in the form prescribed in the Revised Manual which came into use on the 1st August 1887. The forms have been printed in triglot and are suitable both for Huzúr and Táluka offices.

Some modifications were proposed in the Statiscal Forms at the Delhi Conference with a view of assimilating the Provincial and Imperial returns. The subject and that of amending the method of preparing the Fiscal returns have been referred by Government to the Divisional Commissioners. The water supply return being quinquennial does not appear this year but will be furnished

during the next when it is due (*vide* paragraph 43, last Annual Report, page 28-29). Certain returns were not received last year in time for compilation. This year all have been received and the set is complete for the whole of the Presidency proper. The Commissioner in Sind promises returns for that province in the prescribed forms next season.

The returns show improvement in compilation. But except in Bijápur and Dhárwár, where the Collectors have the aid of a special staff, they are not received early enough to allow of references being made upon points requiring explanation.

The Collectors of Belgaum, Khándesh, Násik, Ahmadabad, Surat, Kolába, and Kánara have favoured me with full remarks on the variations in the statistics. From the other districts I have no such assistance. The value of the returns is greatly enhanced by the light thrown upon them by the Collector's observations and comments. Mr. Ozanne drew attention to similar omissions last year and I hope to be pardoned for pressing this subject once more upon the recollection of Collectors.

**Return No. I.—Area of Available Statistics.**

52. As remarked last year the exact gross area of the Presidency awaits for determination, the completion of the survey. The reported area for Sind shows a decrease of nearly 20¾ lákhs of acres in spite of an increase of over 400 villages. The Presidency proper shows an increase of 38,249 acres. The numbers of Government and Alienated villages and corresponding areas vary on account of the classification, this year, as alienated, of certain villages formerly classed as Government (*e.g.* 69½ villages in Ahmadnagar) and an increase of 17 Government villages in Kánara consequent upon the survey settlement. Other variations are trifling and accountable for by transfers of territory, &c.

*Changes in the Area for which Statistics are available.*

This area shows an increase of nearly 1¾ lákhs or 3 per mille on last year's and is chiefly due to the following causes :—

(1) Certain villages whose statistics were not ranked as available last year were classed as available this year.

(2) In some villages statistics were for the first time made available by the introduction of survey settlement.

Other minor causes are not worth mention.

The following districts show considerable increase. Of these increase in Khándesh is owing to the first cause and in the Collector's opinion a mistake. The correction would involve alteration of a large number of returns and the basis on which statistics of these villages in question are classed as 'available' or 'not available,' requires discussion. The numbers therefore are allowed to stand for the present year as returned. The decrease in Dhárwár is owing to the statistical records of two villages for which statistics are available being mislaid.

| | Thousand Acres. |
|---|---|
| Khándesh ... ... | +44 |
| Sholápur ... ... | +79 |
| Kánara ... ... | +56 |

There are other variations due to the corrections of mistakes of last year.

*Changes in the Area—not available for Statistics.*

The area in which statistics are not available has fallen in nearly direct proportion to the rise of that for which statistics are available. The number of villages differs owing to the 17 fresh villages of Kánara brought on the list at the survey settlement.

**Return No. II.—Cultivated and Uncultivated Area.**

53. The following table, similar to that in the last year's report, summarises the information contained in Returns Nos. 1 and 2 :—

| No. | District. | Percentage on gross area of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas | | | | |
|---|---|---|---|---|---|---|---|
| | | | Cultivated. | | Uncultivated. | | Forest. |
| | | | Actually cropped. | Current fallows. | Available for cultivation. | Not available for cultivation. | |
| | A.—Presidency Proper. | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 1·00 | 58 | 19 | 4 | 19 | ... |
| 2 | Kaira ... ... ... | 8·73 | 75 | 5 | 8 | 12 | ... |
| 3 | Panch Maháls ... ... | 22·78 | 34 | 14 | 33 | 8 | 11 |
| 4 | Broach ... ... ... | 1·99 | 61 | 9 | 4 | 26 | ... |
| 5 | Surat ... ... ... | 2·44 | 45 | 27 | 6 | 18 | 4 |
| | Average ... | 6·05 | 56 | 16 | 9 | 17 | 2 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 11·68 | 56 | 6 | 18 | 12 | 8 |
| 7 | Násik ... ... ... | 3·83 | 54 | 10 | 6 | 10 | 20 |
| 8 | Ahmadnagar ... ... | 2·51 | 63 | 10 | 3 | 11 | 13 |
| 9 | Poona ... ... ... | 1·16 | 62 | 10 | 1 | 15 | 12 |
| 10 | Sholápur ... ... | ... | 72 | 12 | 1 | 9 | 6 |
| 11 | Sátára ... ... ... | 4·26 | 60 | 13 | 2 | 10 | 15 |
| | Average ... | 4·72 | 61 | 10 | 6 | 11 | 12 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... ... | 0·19 | 61 | 12 | 6 | 7 | 14 |
| 13 | Bijápur ... ... ... | 0·93 | 73 | 11 | 6 | 5 | 5 |
| 14 | Dhárwár ... ... ... | 2·66 | 71 | 9 | 3 | 7 | 10 |
| | Average ... | 1·25 | 69 | 11 | 5 | 6 | 9 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 3·97 | 22 | 20 | 7 | 36 | 15 |
| 16 | Kolába ... ... ... | 2·39 | 33 | 21 | 4 | 24 | 18 |
| 17 | Ratnágiri ... ... | 28·89 | 26 | 44 | 1 | 28 | 1 |
| 18 | Kánara ... ... ... | 5·17 | 9 | 4 | 36 | 12 | 39 |
| | Average ... | 11·33 | 20 | 21 | 14 | 25 | 20 |
| | Average A. ... | 5·42 | 55 | 13 | 8 | 13 | 11 |
| | B.—Sind. | | | | | | |
| 19 | Karáchi ... ... ... | 27·40 | 11 | 14 | 17 | 55 | 3 |
| 20 | Hyderabad ... ... | 25·40 | 15 | 26 | 41 | 18 | ... |
| 21 | Shikárpur ... ... | 35·86 | 19 | 20 | 32 | 8 | 21 |
| 22 | Upper Sind Frontier ... | ... | 19 | 39 | 22 | 15 | 5 |
| 23 | Thar and Párkar ... | 100·00 | ... | ... | ... | ... | ... |
| | Average B. ... | 54·03 | 16 | 22 | 31 | 23 | 8 |
| | Average [illegible] Presidency ... | 21·21 | 48 | 14 | 12 | 15 | 11 |

The gr[illegible]a of the Presidency, exclusiv[illegible]ágiri, the statis-
Gross ar[illegible]cs for which district are no[illegible]ows a slight
[illegible]crease (18,832 acres) comp[illegible]ear. The

extension of cultivation reported last year has been still further increased in the Deccan, Karnátak, and Kánara and Kolába in the Konkan, but has fallen off in Gujarát (Panch Maháls excepted). Khándesh, Poona and Ahmadnagar are remarkable exceptions in the Deccan. As regards Ahmadnagar the decrease is only apparent, and I am inclined to doubt the accuracy of the return. The late rainfall to my knowledge in the northern parts of Ahmadnagar enabled a large amount of land to be put under wheat; whereas though the bájri harvest was poor there was nothing to prevent the ordinary amount of land being taken up. I should have expected therefore that there would have been a considerable increase in the twice-cropped area and a diminution under current fallows, whereas the exact contrary is the case.

In support of my view I must observe that the neighbouring Collectorate of Násik where the season was similar shows figures which favour this conclusion, and the details of uncultivated area show what was notoriously the case, that the demand for waste land was brisk, a fact inconsistent with a reduction in the gross cropped area. The increase in Sholápur and Kánara is, no doubt, also in part at least apparent and is due to the increase in area for which statistics are available.

Twice-cropped area.

The twice-cropped area is almost stationary (Ratnágiri excluded) showing a decrease of only 3 thousand acres, probably on account of the unfavourable rainfall in Surat, Broach and Kaira and to amendments in the registration of lands with row crops intersown in Belgaum, in which district until last year such lands had been registered as twice-cropped.

Net cropped area.

The net cropped area has risen slightly, *viz.* 22,146 acres excluding Ratnágiri which is less than 1 per mille. There are, however, in the different districts large variations. In Gujarát, Khándesh and Ahmadnagar the decrease is remarkable. The reasons are sufficiently indicated in the explanations given above of the variations in gross cropped area. In Belgaum the decrease under twice-cropped owing to amended registration is followed by a corresponding increase in net cropped.

Current fallows.

Current fallows show a considerable increase, *viz.* 242,524, or 5 per cent. (excluding Ratnágiri). The increase is general throughout the Presidency and conspicuous in both the Deccan and Karnátak. In these latter tracts the explanation given by the Collector of Ahmadnagar is probably correct, *viz.* that the bájri harvest was in many places a failure and that the lands not being re-sown were reckoned as fallow. In Gujarát also the kharif season was unfavourable enough to account for the comparative less increase.

Uncultivated area.

These figures show a substantial and general decrease partly owing to the taking up of waste lands but mainly owing to the large increase in forest area. In Kánara alone there is an increase owing to the survey settlement operations. In the unassessed land there is a decrease in ten and an increase in eight districts owing to less favourable season for cultivation of river-bed lands in certain districts, forest operations and other causes.

There is a considerable increase in the land no longer available for cultivation owing to its being handed over to the Forest Department. In Kánara the forest area has risen from 32 to 39 and in Panch Maháls from 6 to 11 per cent.

**Return No. III.—Crops.**

54. The rainfall was favourable for large sowing op[illegible]ions especially in kharíf although the outturn was not everywhere corres[illegible]gly large. The total area under crops in the Presidency proper exclusive [illegible]ágiri, was therefore in no way inferior to that of last year, though scarc[illegible]rger. On the other hand, abundant monsoon rain favoured the kharíf [illegible]t, while in the Deccan much kha[illegible] land, if sown at all, had to be repla[illegible] crops owing to unsuitable rai[illegible] Accordingly in Gujarát there is [illegible]nder cotton and bájri, elsew[illegible]pt in the Karnátak, a decr[illegible]e large rabi cultivation [illegible] and Karnátak gives an in[illegible] which more than coun[illegible]ing off in Khándesh and [illegible] area under

food crops in the Presidency proper, Ratnágiri excepted, increased by a little more than 1 per cent., while that under non-food crops decreased by four. The table shows the effect of the season at a glance. Ratnágiri statistics are not sufficiently trustworthy for inclusion.

The following table, similar to that given in last year's Report, shows the effect of season as far as the area sown is concerned :—

PRESIDENCY PROPER (EXCLUDING RATNÁGIRI.)

| Crops. | 1886-87. Thousand Acres. | 1887-88. Thousand Acres. | Increase. Thousand Acres. | Increase. Per cent. | Decrease. Thousand Acres. | Decrease. Per cent. |
|---|---|---|---|---|---|---|
| Jowári ... ... ... ... | 6,832 | 7,121 | 289 | 4·2 | ... | ... |
| Bájri ... ... ... ... | 4,904 | 4,638 | ... | ... | 266 | 5·4 |
| Paddy ... ... ... ... | 1,560 | 1,587 | 27 | 1·7 | ... | ... |
| Wheat ... ... ... ... | 1,957 | 2,209 | 252 | 12·8 | ... | ... |
| Others ... ... ... ... | 1,680 | 1,714 | 34 | 2·0 | ... | ... |
| Total Cereals ... | 16,933 | 17,269 | 336 | 1·9 | ... | ... |
| Tur ... ... ... ... | 628 | 545 | ... | ... | 83 | 13·2 |
| Gram ... ... ... ... | 712 | 792 | 80 | 11·2 | ... | ... |
| Others ... ... ... ... | 1,306 | 1,199 | ... | ... | 107 | 8·1 |
| Total Pulses ... | 2,646 | 2,536 | ... | ... | 110 | 4·2 |
| Tobacco... ... ... ... | 86 | 80 | ... | ... | 6 | 6·9 |
| Sugarcane ... ... ... | 77 | 80 | 3 | 3·8 | ... | ... |
| Oil-seeds ... ... ... | 1,793 | 1,626 | ... | ... | 167 | 9·3 |
| Cotton ... ... ... ... | 2,840 | 2,816 | ... | ... | 24 | 0·8 |
| Food Crops Total ... | 19,800 | 20,029 | 229 | 1·1 | ... | ... |
| Non-food Crops Total ... | 5,000 | 4,790 | ... | ... | 210 | 4·2 |
| Grand Total ... | 24,800 | 24,819 | 19 | ... | ... | ... |

**Jowari.**—Increase 4·2 per cent. is confined to the Deccan, south of Násik and Bijápur in the Karnátak. There was a general decrease in the rest of the Karnátak and Gujarát, which was counterbalanced by an increase in cotton and other kharíf crops, *e.g.* bájri in Broach, rice in Surat, cotton elsewhere.

| | Thousand Acres. |
|---|---|
| Ahmadnagar .. .. | +135 |
| Poona .. .. .. | +43 |
| Sholápur .. .. .. | +180 |
| Bijápur .. .. .. | +57 |
| Ahmadabad .. .. .. | −12 |
| Broach .. .. .. | −11 |
| Surat .. .. .. | −10 |
| Khándesh .. .. .. | −25 |
| Belgaum .. .. .. | −28 |
| Dhárwár .. .. .. | −19 |

**Bájri.**—A general decrease of which Ahmadnagar with 172 thousand acres is the most notable example. There can be little doubt that a great deal of this area was sown, and the crops failed during the break in October and were replaced where possible by rabi crops. The most remarkable increase is in Bijápur (49,956). Bájri is now a good deal grown for export.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... | —172 |
| Násik ... ... | —24 |
| Poona ... ... | —43 |
| Sholápur ... | —101 |

**Paddy.**—The area under paddy shows a general increase. A large decrease is reported from Ratnágiri (34,713). But the correctness of the estimate is doubtful and does not agree with the season which was favourable to a full tillage of early rice not specially unfavourable to the later variety.

**Wheat.**—In the Deccan and Karnátak wheat shows a general increase and has replaced last year's decrease of one lákh by an increase of two and a half. This was due to favourable late rain which induced the rayats to bring new land under wheat as well as to sow it on replacing bájri and early pulses which failed. There is some probability also that wheat is displacing cotton in the Karnátak and Khándesh.

| | Thousand Acres. |
|---|---|
| Khándesh ... | +85 |
| Násik ... ... | +96 |
| Ahmadnagar ... | +66 |
| Poona ... ... | +18 |
| Belgaum ... ... | +12 |
| Dhárwár ... ... | +34 |

In Gujarát the phenomena are the reverse where the wheat area shows a decrease and cotton an increase, due to the abundant kharíf rainfall.

**Other Cereals**—which show noticeable increase are : crops of rála and rági which are most important to the inhabitants of the Ghát and the Konkan and seem to have been on the increase during the past 2 years. Kodra grown in Gujarát and Konkan and vari throughout the Presidency proper, show a considerable decrease.

| | Thousand Acres. |
|---|---|
| Rála ... ... | +32,822 |
| Rági ... ... | +7,316 |
| Kodra ... ... | —13,933 |
| Vári ... ... | —7,663 |

The cultivation of barley is reported to be increasing in Northern Gujarát.

**Pulses.**—With the exception of gram, a distinctively rabi pulse and which shows a remarkable increase of 80 thousand acres or 11 per cent, the pulses show a general decrease. This is probably due to the same cause as the decrease in bájri—the crop with which they are generally mixed. The probability is that like bájri they were sown, but failing, were replaced, where possible, by other crops and were therefore not noticed, or the land remained fallow. The falling off in tur is rather difficult to account for.

| *Gram.* | Thousand Acres. |
|---|---|
| Khándesh ... | +23 |
| Násik ... ... | +10 |
| Ahmadnagar ... | +12 |
| Sholápur ... | +12 |
| Sátára ... ... | +17 |

| *Tur.* | Thousand Acres. |
|---|---|
| Ahmadnagar ... | —13 |
| Sholápur ... | —27 |
| Bijápur ... ... | —13 |
| Sátára ... ... | —7 |

**Tobacco**—Shows a decrease of nearly 7 per cent. The year was unfavourable to tobacco in Gujarát, elsewhere there were unsold stocks on hand and prices had sunk.

| | Thousand Acres. |
|---|---|
| Kaira ... ... | —3 |
| Khándesh ... | —2 |
| Belgaum ... | —4 |

**Sugarcane**—Shows a general increase owing to abundant rainfall, except in Dhárwár where the area decreased owing to insufficient supply in the large tanks of Kod and Gadag.

**Oil-seeds**:—*Linseed.*—The falling off is due to the discouragement produced by the loss last year by rust, while considerable area actually sown with linseed and replaced by other rabi crops is not shown.

| | Thousand Acres. |
|---|---|
| Khándesh ... | —4 |
| Násik ... ... | —25 |
| Ahmadnagar ... | —11 |
| Sholápur ... | —13 |
| Bijápur ... ... | —46 |

*Gingelly.*—The same reason accounts for a similar decrease in sesame, about seven-eighths of it being in Khándesh.

*Kardai or Safflower*—Has risen from 452 to 503 thousand acres concurrently with the rise in wheat and jowári which it accompanies.

Castor and niger-seeds show a decrease, but groundnut an increase. On the whole oil-seeds have fallen from 1,793 to 1,626 thousand acres or 9·3 per cent.

**Cotton.**—The decrease of the area under this crop amounts to about 1 per cent. The two chief Gujarát districts, Ahmadabad and Broach, show increases; but elsewhere the decrease was general. The usual rotation brought about a diminution in the Deccan after the large area last year, while rain was less favourable than below gháts. As above remarked too, wheat may be supplanting cotton above gháts in soils favourable to the growth of the

| | Thousand Acres. |
|---|---|
| Khándesh ... | —22 |
| Ahmadnagar ... | —26 |
| Poona ... ... | —9 |
| Sholápur ... ... | —19 |
| Bijápur ... ... | —41 |
| Dhárwár ... ... | —12 |

former crop. Cotton failed in places and, where ploughed in and replaced by a rabi crop, the area would not be shown.

Green fodder.

The small area under green fodder—principally fodder-jowári—has decreased about 22 per cent. The large supply of grass in Gujarát and the heavy jowári harvests elsewhere yielding abundant supplies of "kadbi" would account for this.

55. In final elucidation of these remarks and of the detailed tables to be found in the Appendix I add two tables. One shows the distribution of the principal crops in each district including Sind and the other the proportion which the area in each district holds with respect to the gross area of each such crop in the Presidency proper.

*Percentages of food and other crops on the gross area cropped in each District.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food crops. | Non-food crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Presidency Proper. | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. | 19 | 15 | 6 | 13 | 3 | 2 | 58 | 7 | 1 | 30 | 3 | 1 | 66 | 34 |
| 2 | Kaira .. .. .. .. | 9 | 25 | 19 | 4 | 23 | 1 | 81 | 11 | 2 | 1 | 2 | 3 | 94 | 6 |
| 3 | Panch Mahâls .. .. .. | 1 | 12 | 17 | 5 | 15 | 22 | 72 | 18 | .. | .. | 9 | 1 | 90 | 10 |
| 4 | Broach.. .. .. .. | 19 | 2 | 4 | 12 | 1 | .. | 38 | 12 | 2 | 44 | 3 | 1 | 52 | 48 |
| 5 | Surat ... .. .. .. | 18 | 1 | 20 | 6 | 9 | .. | 54 | 18 | 2 | 18 | 7 | 1 | 74 | 26 |
| | Average .. | 15 | 13 | 11 | 9 | 9 | 3 | 60 | 12 | 1 | 22 | 4 | 1 | 73 | 27 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. | 17 | 19 | 1 | 14 | 1 | .. | 52 | 7 | 1 | 32 | 7 | 1 | 60·0 | 40·0 |
| 7 | Násik .. .. .. .. | 5 | 35 | 3 | 19 | 11 | .. | 73 | 11 | 1 | 1 | 13 | 1 | 85 | 15 |
| 8 | Ahmadnagar .. .. .. | 35 | 34 | .. | 11 | 2 | .. | 82 | 10 | .. | 1 | 6 | 1 | 92 | 8 |
| 9 | Poona .. .. .. .. | 35 | 33 | 3 | 6 | 5 | 1 | 83 | 8 | 1 | .. | 7 | 1 | 92 | 8 |
| 10 | Sholápur .. .. .. | 59 | 12 | 1 | 3 | .. | 1 | 76 | 9 | 1 | .. | 12 | 2 | 86 | 14 |
| 11 | Sátára .. .. .. .. | 28 | 30 | 2 | 4 | 8 | 1 | 73 | 18 | 1 | 1 | 5 | 2 | 92 | 8 |
| | Average .. | 29 | 27 | 2 | 10 | 4 | .. | 72 | 10 | 1 | 8 | 8 | 1 | 83 | 17 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. | 37 | 10 | 6 | 7 | 10 | .. | 70 | 12 | 1 | 10 | 4 | 3 | 83 | 17 |
| 13 | Bijápur .. .. .. .. | 48 | 12 | .. | 7 | 2 | .. | 69 | 9 | .. | 14 | 7 | 1 | 78 | 22 |
| 14 | Dhárwár .. .. .. | 30 | .. | 7 | 13 | 9 | .. | 59 | 10 | 1 | 23 | 4 | 3 | 70 | 30 |
| | Average .. | 39 | 8 | 4 | 9 | 6 | .. | 66 | 10 | 1 | 16 | 5 | 2 | 77 | 23 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | .. | .. | 63 | .. | 23 | .. | 86 | 8 | 1 | .. | 4 | 1 | 95 | 5 |
| 16 | Kolába .. .. .. .. | .. | .. | 54 | .. | 37 | .. | 91 | 6 | 1 | .. | 2 | .. | 98 | 2 |
| 17 | Ratnágiri .. .. .. | .. | .. | 28 | .. | 60 | .. | 88 | 6 | 2 | .. | 3 | 1 | 96 | 4 |
| 18 | Kánara .. .. .. .. | 1 | .. | 77 | .. | 4 | .. | 82 | 3 | 10 | .. | .. | 5 | 95 | 5 |
| | Average .. | .. | .. | 53 | .. | 34 | .. | 87 | 6 | 3 | .. | 3 | 1 | 96 | 4 |
| | Average A. .. | 28 | 18 | 7 | 9 | 7 | 1 | 70 | 10 | 1 | 11 | 7 | 1 | 81 | 19 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi.. .. .. .. | 15 | 6 | 47 | 11 | .. | 2 | 81 | 9 | 2 | .. | 6 | 2 | 92 | 8 |
| 20 | Hyderabad .. .. .. | 13 | 33 | 24 | 5 | .. | 1 | 76 | 3 | 3 | 7 | 9 | 2 | 82 | 18 |
| 21 | Shikárpur .. .. .. | 36 | 3 | 23 | 19 | .. | .. | 81 | 7 | 2 | 1 | 8 | 1 | 90 | 10 |
| 22 | Upper Sind Frontier .. | 45 | 4 | 7 | 9 | .. | .. | 65 | 4 | 1 | .. | 30 | .. | 70 | 30 |
| 23 | Thar and Párkar .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Average B. .. | 25 | 15 | 25 | 11 | .. | 1 | 77 | 6 | 3 | 3 | 10 | 1 | 86 | 1 |
| | Average for the Presidency .. | 28 | 18 | 8 | 9 | 7 | .. | 70 | 10 | 1 | 11 | 7 | 1 | 81 | 19 |

*Percentages of food and other crops on the gross area under each in the Presidency proper.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food crops. | Non-food crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 1 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. | 3·9 | 4·5 | 4·6 | 8·6 | 2·8 | 13·6 | 4·7 | 4·2 | 4·1 | 15·1 | 2·8 | 2·1 | 4·6 | 9·9 |
| 2 | Kaira .. .. .. .. | 0·9 | 4·0 | 8·1 | 1·2 | 9·6 | 4·7 | 3·4 | 3·3 | 5·3 | 0·3 | 0·6 | 6·9 | 3·4 | 0·9 |
| 3 | Panch Mahále .. .. .. | 0·0 | 0·9 | 3·2 | 0·8 | 2·8 | 39·3 | 1·3 | 2·3 | 0·6 | 0·0 | 1·8 | 0·8 | 1·5 | 0·7 |
| 4 | Broach .. .. .. .. | 1·5 | 0·2 | 1·3 | 3·0 | 0·4 | 0·0 | 1·2 | 2·6 | 4·4 | 8·8 | 0·9 | 1·1 | 1·4 | 5·5 |
| 5 | Surat .. .. .. .. | 1·3 | 0·1 | 6·1 | 1·5 | 2·7 | 0·9 | 1·6 | 3·6 | 4·4 | 3·5 | 2·2 | 1·6 | 1·9 | 2·9 |
| | Total .. | 7·6 | 9·7 | 23·3 | 15·1 | 18·3 | 58·5 | 12·2 | 16·0 | 18·8 | 27·7 | 8·3 | 12·5 | 12·8 | 19·9 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. | 6·8 | 12·1 | 1·3 | 18·0 | 1·4 | 4·7 | 8·5 | 8·1 | 5·1 | 32·6 | 11·7 | 10·4 | 8·4 | 23·8 |
| 7 | Násik .. .. .. .. | 1·3 | 14·9 | 2·8 | 17·1 | 11·6 | 2·1 | 8·0 | 8·6 | 8·8 | 0·8 | 16·3 | 2·9 | 8·1 | 6·3 |
| 8 | Ahmadnagar .. .. .. | 12·9 | 19·3 | 0·5 | 12·9 | 2·1 | 3·7 | 12·2 | 10·4 | 4·5 | 1·1 | 9·1 | 6·7 | 11·9 | 4·3 |
| 9 | Poona .. .. .. .. | 10·7 | 15·4 | 3·5 | 5·6 | 5·7 | 5·9 | 10·0 | 7·0 | 12·2 | 0·0 | 8·8 | 5·3 | 9·9 | 3·4 |
| 10 | Sholápur .. .. .. | 17·5 | 5·4 | 1·6 | 2·7 | 0·1 | 12·5 | 9·1 | 7·7 | 4·3 | 0·3 | 15·4 | 10·3 | 8·8 | 6·2 |
| 11 | Sátára .. .. .. .. | 7·3 | 12·4 | 2·4 | 3·1 | 8·4 | 8·7 | 7·8 | 13·0 | 10·8 | 0·5 | 6·2 | 11·9 | 8·4 | 3·2 |
| | Total .. | 56·5 | 79·5 | 12·1 | 59·4 | 29·3 | 37·6 | 55·6 | 54·8 | 45·7 | 35·3 | 67·5 | 47·5 | 55·3 | 47·2 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. | 9·3 | 3·8 | 6·2 | 5·1 | 9·2 | 3·5 | 6·9 | 8·0 | 8·1 | 6·6 | 4·5 | 13·3 | 7·1 | 6·4 |
| 13 | Bijápur .. .. .. .. | 17·9 | 6·9 | 0·6 | 8·4 | 2·3 | 0·4 | 10·3 | 8·7 | 3·0 | 13·4 | 11·7 | 5·6 | 10·0 | 12·2 |
| 14 | Dhárwár .. .. .. | 8·7 | 0·1 | 8·5 | 12·0 | 10·4 | 0·0 | 7·0 | 8·6 | 6·1 | 17·0 | 5·4 | 14·3 | 7·2 | 12·9 |
| | Total .. | 35·9 | 10·8 | 15·3 | 25·5 | 21·9 | 3·9 | 24·2 | 25·3 | 17·2 | 37·0 | 21·6 | 33·2 | 24·3 | 31·5 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | .. | .. | 19·2 | .. | 6·6 | .. | 2·6 | 1·6 | 3·0 | .. | 1·3 | 1·9 | 2·4 | 0·6 |
| 16 | Kolába .. .. .. .. | .. | .. | 11·6 | .. | 7·6 | .. | 1·9 | 1·0 | 1·0 | .. | 0·4 | 0·3 | 1·8 | 0·2 |
| 17 | Ratnágiri .. .. .. | .. | .. | 8·0 | .. | 15·8 | .. | 2·4 | 1·0 | 4·2 | .. | 0·9 | 1·4 | 2·3 | 0·4 |
| 18 | Kánara .. .. .. .. | .. | .. | 10·5 | .. | 0·5 | .. | 1·1 | 0·3 | 10·1 | .. | .. | 3·2 | 1·1 | 0·2 |
| | Total .. | .. | .. | 49·3 | .. | 30·5 | .. | 8·0 | 3·9 | 18·3 | .. | 2·6 | 6·8 | 7·6 | 1·4 |
| | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

56. **Outturn of Crops.**—Reasons have been assigned for distrusting the estimates of outturn at present. At the same time in this year's crop experiment report I have given grounds for believing that in the case of wheat at any rate the local estimate can be ascertained with tolerable approximation to the truth and that the outturn given by the formulæ as corresponding to a particular anna valuation are not very wide of the mark. There is no occasion therefore to despair of obtaining a correct estimate of the outturn.

*Approximate Anna Valuation of Crops in each District, 1887-88.*

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowár. | Bájri. | Paddy. | Wheat. | Kodra. | Rági. | Vari. | Tur. | Gram. | Cotton. |
| | *I.—Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad... ... ... | 10·9 | 12·8 | 10·8 | 5·7 | 8·8 | 9·7 | 10·2 | 12·0 | 10·2 | 7·3 |
| 2 | Kaira ... ... ... | 12·4 | 9·7 | 17·2 | 9·8 | 11·6 | 10·5 | 15·8 | 14·8 | 10·5 | 14·4 |
| 3 | Panch Mahále ... ... | 11·8 | 8·6 | 16·0 | 15·4 | 14·0 | 14·2 | 11·0 | 12·9 | 15·4 | 7·6 |
| 4 | Broach ... ... ... | 10·6 | 10·2 | 7·3 | 10·2 | 8·0 | 5·8 | 16·0 | 10·8 | 5·4 | 11·4 |
| 5 | Surat... ... ... ... | 10·5 | 6·5 | 13·7 | 11·0 | 8·0 | 8·2 | 16·0 | 11·2 | 11·4 | 8·0 |
| | *II.—Deccan.* | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 11·2 | 12·1 | 13·4 | 16·8 | 16·0 | 16·0 | 15·8 | 10·9 | 14·6 | 12·6 |
| 7 | Násik ... ... ... | 14·0 | 13·3 | 14·5 | 16·5 | ... | 15·3 | 12·6 | 10·1 | 14·8 | 11·3 |
| 8 | Ahmadnagar ... ... | 13·2 | 12·8 | 13·7 | 15·4 | 13·4 | 15·8 | 15·3 | 13·7 | 13·7 | 6·4 |
| 9 | Poona ... ... ... | 15·0 | 12·5 | 16·1 | 14·4 | ... | 15·4 | 15·2 | 12·1 | 15·4 | 2·6 |
| 10 | Sholápur ... ... ... | 11·4 | 8·4 | 13·0 | 12·1 | ... | 14·8 | 10·4 | 16·2 | 11·6 | 6·6 |
| 11 | Sátára ... ... ... | 13·4 | 14·0 | 13·0 | 13·0 | ... | 15·8 | 14·2 | 10·5 | 14·2 | 12·4 |

| No. | District—*continued.* | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowár. | Bájri. | Paddy. | Wheat. | Kodra. | Rági. | Varaí. | Tur. | Gram. | Cotton. |
| | *III.—Karnátak.* | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 12·6 | 13·8 | 8·9 | 12·1 | 5·3 | 12·9 | 11·7 | 12·5 | 10·2 | 11·7 |
| 13 | Bijápur ... ... ... | 10·4 | 10·5 | 12·1 | 12·8 | 14·6 | 7·8 | 14·2 | 8·9 | 12·0 | 9·4 |
| 14 | Dhárwár ... ... ... | 11·8 | 7·6 | 7·5 | 9·9 | 11·4 | 13·1 | 12·9 | 9·1 | 10·6 | 10·8 |
| | *IV.—Konkan.* | | | | | | | | | | |
| 15 | Thána ... ... ... | 16·0 | ... | 16·4 | 15·7 | 15·5 | 16·5 | 17·6 | 14·1 | 13·6 | ... |
| 16 | Kolába ... ... ... | ... | ... | 15·9 | 8·0 | 14·0 | 16·2 | 16·4 | 10·8 | 11·4 | ... |
| 17 | Ratnágiri ... ... ... | ... | ... | 14·6 | ... | 12·4 | 14·9 | 13·0 | 16·0 | 16·0 | ... |
| 18 | Kánara ... ... ... | 5·3 | ... | 12·9 | ... | ... | ... | 5·8 | 6·5 | 5·6 | ... |

In the above table the valuations are calculated on the standard by which 16 annas represent an average crop.

57. The season seems to have been unfavourable for bájri and perhaps rice in the Konkan. It was an excellent season for rabi jowári above gháts and better still for wheat. Cotton was generally injured by late rain but was a fair crop in Khándesh; early pulses suffered with the bájri. Irrigated wheat did not suffer nearly so severely from rust as the year before, and there cannot have been anything like the previous year's heavy losses from linseed. The failure in gingelly must have been felt in Khándesh. Cotton on the whole was not an abundant crop in Gujarát. But above gháts crops did well in the western tracts, while in the arid zone the year was saved by the late rain, which recouped the kharif losses by an abundant rabi.

Fruit-bearing trees.

58. There is some improvement visible this year in the returns of fruit-bearing trees. The figures are still no better than rough approximation, but many omissions of last year have been supplied. These alone account for the increase, which is apparent in the current year's returns. In particular the minute supervision in Dhárwár and Bijápur has led to an accurate registration of date palms which accordingly show a large increase chiefly in Bijápur.

*Number of principal fruit-bearing trees in thousands, 1887-88.*

| No. | Province. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy Palm. | Date Palm. |
|---|---|---|---|---|---|---|---|
| 1 | Gujarát ... ... | 484 | 116 | 3 | 6 | 195 | 747 |
| 2 | Deccan ... ... | 690 | 48 | 7 | 3 | 8 | 94 |
| 3 | Karnátak ... ... | 336 | 96 | 18 | 54 | ... | 854 |
| 4 | Konkan ... ... | 339 | 34 | 151 | 1,460 | 79 | 13 |
| | Total ... | 1,849 | 294 | 179 | 1,523 | 282 | 1,708 |

| *Betel-nut.* | Thousand. | *Moha.* | Thousand. |
|---|---|---|---|
| Thána ... ... .. | 4 | North Gujarát ... ... | 111 |
| Kolába ... ... ... | 2 | Khándesh ... ... | 7 |
| Ratnágiri ... ... ... | 295 | Násik ... ... ... | 4 |
| *Keshew-nut.* | | *Hirda.* | |
| Belgaum ... ... ... | 2 | | |
| Thána ... ... ... | 6 | Ahmadnagar ... ... | 14 |
| Ratnágiri ... ... ... | 51 | | |
| Kánara ... ... ... | 93 | *Rátámbi* (Kokam). | |
| *Ráyan.* | | | |
| North Gujarát (Kaira) ... | 63. | Ratnágiri ... ... ... | 13 |

Some districts add to the list the enumeration of other fruit trees of especial local importance. The list is, however, incomplete.

Coffee, which has a special local importance in Belgaum, is shown among drugs and narcotics with an area of 139 acres, but the number of trees is not given. Its cultivation has on the whole not diminished.

**Return No. IV.—Irrigation.**

59. The net irrigated area in the presidency proper has increased from 754 to 776 thousand or about 3 per cent. About three-sevenths of this increase is due to the inclusion, for the first time, of Ratnágiri and Kolába in the returns. The districts marginally noted exhibit the largest increase. Sugarcane cultivation continues to increase in Poona, Sátára and Sholápur and that of irrigated wheat in Ahmadabad, Kaira, Ahmadnagar, Poona and Sholápur. The large apparent decrease in irrigated rice is due to a great fall in Kánara, the cause of which is not explained by the Collector. The increase in the area under non-food crops is distributed over the Presidency, the Karnátak and Kaira and Khándesh excepted. The net irrigated area in the Presidency proper amounts to about 3 per cent. and in Sind to 99 per cent. of the whole. In the latter province, the large increase of one lákh in the area irrigated from canals is remarkable against a decrease of about 16,000 acres in the area irrigated from other sources.

| | Thousand Acres. |
|---|---|
| Ahmadabad ... | +13 |
| Póona ... ... | +15 |
| Ahmadnagar ... | + 6 |

**Return No. V.—Agricultural Stock.**

60. This is the second year in which the figures are available in the revised forms. These forms have greatly improved the classification of stock. But until our village officers have got more familiar with the methods of classifying stock, inferences as to variations in the classes drawn from a comparison of the figures of different years will be misleading. The figures for buffaloes are a case in point. We find there are over nine hundred thousand she-buffaloes with over five hundred and forty-five thousand calves, but the number of he-buffaloes of all sorts is only three hundred and eleven thousand. The proportion of calves to females is only a little below that in cows. The proportion of males to females should therefore be pretty nearly the same in the two classes of animals. In fact it is clear that an enormous stock of he-buffaloes remains to be accounted for. The discrepancy is specially noticeable in Gujarát where the miserably small number of he-buffaloes in contrast to an abundance of milch-buffaloes is startling. The enumeration of bulls is probably equally defective, many of the so-called plough cattle being probably entire. There are other instances that might be adduced, and it is clear that greater accuracy cannot be secured without the constant practice and criticism for which an annual census gives opportunity. I have endeavoured in the following remarks to avoid making over-hazardous deductions.

*Cattle.*—The total figures for these are probably a tolerable approximation to the truth, buffaloes excepted, and it will not be unsafe to congratulate ourselves on a substantial increase shown by the figures to amount to 2½ lákhs or about 3 per cent. In the Gujarát districts, however, there was a decrease, except in Ahmadabad. This decrease amounted in Broach to nearly 6 per cent. and in the Panch Maháls to about 4 per cent. In Broach the Collector mentions the fact that some cultivators had to sell their cattle to meet the Government demand. But the main cause was apparently an outbreak, though not very serious, of disease and probably omissions to enumerate cattle absent at distant grazing grounds at the time of enumeration. The largest recorded increase was in Ratnágiri where it amounts to 35 per cent. This figure is not to be trusted; elsewhere, Kolába and Sátára excepted, there was a general increase fairly distributed. Bijápur heads the list with 7 per cent. increase, largely due to more accurate enumeration obtained by the systematic checks there prevailing.

The increase was to be expected as the year was free from severe disease and the fodder on the whole plentiful while the new railways and the feeder roads attached to them fully maintain the carrying trade.

*Plough Oxen*—Show an increase of 2 per cent. distributed all over the Presidency except Gujarát and Sholápur in the Deccan. The figures for Ratnágiri and Ahmadnagar are not to be relied on, the former for the same considerations as above noted under "Cattle" and the latter because they correspond suspiciously near to the decrease in oxen used for other purposes.

*Plough Buffaloes*—Show a considerable increase, but the figures are quite unreliable.

*Bulls for Breeding purposes.*—Increase six thousand or about 25 per cent. This is probably due in great part to improved enumeration. As above remarked special attention is necessary to prevent enumeration of entire animals among plough cattle. The bull-buffaloe figures show a decrease but are not trustworthy.

*Oxen and buffaloes for other purposes*—net decrease nearly 11,000. This is more than accounted for in one district—Ahmadnagar—where the decrease of 13,000 is almost wholly due to the transfer of a large number of animals to the class of plough cattle. Buffalo figures are untrustworthy.

*Milch cattle* of both kinds—show increase of over 2 per cent. The figures for she-buffaloes are probably pretty accurate. There was a decrease in Gujarát but a fairly general increase elsewhere.

*Young stock*—show a decrease in Gujarát and nearly universal increase elsewhere. The proportion of young to females was 7 to 9 in the ox family and 5 to 9 among buffaloes and the increase shown is 8 and 4 per cent. respectively. These variations are sufficiently commented on above.

*Horses and ponies*—show an increase of 4 per cent. Of the breeding districts, Ahmadabad shows a slight decrease, but the others Poona and Ahmadnagar show substantial increases. In the number of horses and ponies Ahmadnagar with 24,000 is well ahead of every district in the Presidency. Khándesh which comes next in recorded numbers is of course far behind when its large area is taken into account.

*Ploughs*—on the whole show a decided increase (3 per cent.) though the number of large ploughs has diminished in the Karnátak. The increase is no doubt in part due to the brisk cultivation which was evidenced in the maintenance of the large cropped area of last year, and the increased demand for waste.

*Carts*—show an increase of about 3 per cent. pretty equally distributed.

61. The following tables show (1) the proportion of bulls to cows and the percentage of milch on total cattle, and (2) the gross cropped area per pair of plough cattle in the different sections of the Presidency proper. The details vary in no material degree from last year's :—

| Province. | Proportion of Bulls to Cows. | Percentage of Milch Cattle on Total Cattle. |
|---|---|---|
| Gujarát ... ... | 1 to 105 | 36·5 |
| Deccan ... ... | 1 to 86 | 34·1 |
| Karnátak ... ... | 1 to 46 | 31·5 |
| Konkan ... ... | 1 to 34 | 32·6 |
| Total ... | 1 to 64 | 33·8 |

*Gross cropped area per Plough Cattle.*

| | District. | Acres. | | District. | Acres. |
|---|---|---|---|---|---|
| Gujarát. | Ahmadabad ... | 16·4 | Deccan. | Khándesh ... | 17·4 |
| | Kaira ... | 11·9 | | Násik ... | 17·0 |
| | Panch Mahále ... | 10·5 | | Ahmadnagar ... | 17·7 |
| | Broach ... | 19·5 | | Poona ... | 16·0 |
| | Surat ... | 9·8 | | Sholápur ... | 21·0 |
| | | | | Sátára ... | 14·9 |
| | Average ... | 13·2 | | Average ... | 17·3 |
| Konkan. | Thána ... | 6·0 | Karnátak. | Belgaum ... | 16·7 |
| | Kolába ... | 6·7 | | Bijápur ... | 26·8 |
| | Ratnágiri ... | 5·4 | | Dhárwár ... | 17·7 |
| | Kánara ... | 4·6 | | | |
| | Average ... | 5·7 | | Average ... | 20·0 |

62. *Sheep and Goats.*—Sheep show an increase of 2 per cent. almost entirely confined to the Deccan and Karnátak. In Gujarát, Broach alone shows an increase, the others a decrease. Goats again show a large decrease. The Konkan—a country where sheep will not thrive but where the large areas under fallow and the hilly country are an encouragement to goats—shows an increase. The difficulties in the way of a correct registration of sheep and goats are such that I am afraid to comment freely on the variations. But it is difficult to resist the impression that forest restrictions on grazing are affecting the number of goats.

*B.—Rainfall.*

Season of 1887-88.

63. These statistics are summarized in Appendix B. They show that the south-west monsoon began punctually but somewhat lightly in the north of the Presidency. Sowing was accordingly somewhat backward in Gujarát. July rain was heavy everywhere and injuriously so in Gujarát where re-sowing was necessitated in many places. The prolonged break in September and October injured rice both in the Konkan and Gujarát and bájri in Gujarát and the Northern Deccan. In the latter the injury to the kharíf was mitigated locally by light showers during this period. In Vishákha (November) there was heavy rain which was excellent for rabi sowing, but too late to help kharíf, and in time to injure the reaped portion of it. Large kharíf areas were re-sown principally with wheat and jowári.

I cannot but think that the rainfall summary would be improved by being compiled for the year, 1st April to 31st March, thus containing a complete account of both kharíf and rabi seasons.

Season of 1888-89.

The monthly rainfall returns have been regularly published by me in the *Government Gazette.* These show that the rainfall has been very irregular, and in Gujarát and the Northern Konkan, and Northern Deccan, away from the ghát, most deficient for kharíf. In Gujarát the cotton alone can be said to have withstood the drought but at the end of October it gave signs of failing also. Bájri was a very feeble crop, and rice a total failure, fodder and water very scarce. Luckily since the close of the year under report (31st October) there has been rain in North Gujarát, which will assist rabi sowing hitherto restricted to irrigable lands. Khándesh is also badly off, but Ahmadnagar and Násik, Eastern Poona, Sátára and Sholápur, notwithstanding a bad kharíf, will probably recover considerably for the rabi.

The Karnátak, saving perhaps in North-eastern Belgaum, has done well, the latest reports being reassuring except with regard to exotic cotton. The rainfall in some parts of Bijápur has been phenomenally heavy, though not on that account entirely beneficial.

*C.—Crop Experiments.*

Wheat 18; jowári 9; bájri 5; gram 5; sugarcane 4; rice 3; barley 2; linseed 2; harik 2; and vál 2; maize, láng, cotton, rági, rála and tur, one each; total 58.

64. The number of experiments made in 1887-88 was 58 as shown in the margin against 62 in 1886-87. A separate report has been as usual submitted to Government regarding these experiments. The results have been ledgered by crops as suggested by the Government of India.

VIII.—TRADE AND TRADE STATISTICS.

65. In compliance with Government orders contained in their Resolution passed on the last Annual Report, my review on the report on the rail and road-borne trade for 1887-88, has not been as heretofore reproduced here.

The registration and compilation of Road-borne Trade has now been placed under the management and supervision of the Director, Land Records and Agriculture. Under the rotation system sanctioned in Government Resolution No. 8352 of 26th November 1886, with a view to limit the expenditure within

the reduced grant of Rs. 2,000, the traffic was registered at six selected Nákás and therefore recorded a portion only of the total road-borne traffic of the Presidency.

**Conclusion.**

66. The office was engaged in editing/compilation of the various reports received from the District Officers and other authorities regarding the condition of the masses.

As a result of the Conference at Delhi arrangements were proposed and approved by the Bombay and Supreme Governments for obtaining the services of a high class agricultural chemist, three months of whose time was to be passed at Poona. Proposals for a Civil Veterinary Department were also considered and resulted in the transfer of the Horse-breeding Operations to the Revenue and Agricultural Department of the Supreme Government. Matters connected with cattle-breeding and repression of disease were also discussed.

I have much pleasure in testifying to the excellent manner in which the office has worked, and especially to the invaluable assistance given me by the Personal Assistant Ráv Bahádur Bhimbhái Kirpárám and Mr. Ichhárám Bhagvándás.

I have the honour to be,

Sir,

Your most obedient Servant,

J. W. P. MUIR-MACKENZIE,

Acting Director, Land Records and Agriculture,

Bombay.

# STATISTICS.

## A.—AGRICULTURAL.

I.—Area of Available Statistics.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1887-88.

| No. | District. | Number and Area of Villages exclusive of Foreign Territory, Feudatory and Tributary States. | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Surveyed alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. | 832 | 2,319,168 | 52 | 123,518 | 884 | 2,442,686 | 448 | 1,057,017 | 384 | 1,262,151 | 36 | 98,917 | 868 | 2,418,085 | .. | .... | 16 | 24,601 | 16 | 24,601 |
| 2 | Kaira .. .. .. .. | 563 | 994,254 | 28 | 27,463 | 591 | 1,021,717 | 436 | 757,883 | 90 | 174,647 | .. | .... | 526 | 932,480 | 37 | 61,774 | 28 | 27,463 | 65 | 89,237 |
| 3 | Panch Mahals .. .. .. | 610½ | 900,589 | 139½ | 127,424 | 750 | 1,028,013 | 424 | 666,672 | 90½ | 99,482 | 24 | 27,793 | 538½ | 793,947 | 96 | 134,435 | 115½ | 99,631 | 211½ | 234,066 |
| 4 | Broach .. .. .. .. | 408 | 917,715 | 15 | 18,724 | 423 | 936,439 | 407 | 916,536 | 1 | 1,179 | .. | .... | 408 | 917,715 | .. | .... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat .. .. .. .. | 820½ | 1,026,646 | 32½ | 31,055 | 853 | 1,057,701 | 810½ | 1,014,411 | 10 | 12,235 | 4½ | 5,254 | 825 | 1,031,900 | .. | .... | 28 | 25,801 | 28 | 25,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. | 3,223 | 5,509,488 | 111½ | 198,360 | 3,334½ | 5,707,848 | 2,673½ | 4,627,685 | 282 | 310,782 | 63½ | 102,768 | 3,019 | 5,041,235 | 267½ | 571,021 | 48 | 95,592 | 315½ | 666,613 |
| 7 | Násik .. .. .. .. | 1,512 | 3,405,487 | 184 | 300,003 | 1,696 | 3,705,490 | 1,500 | 3,395,328 | .. | .... | 80 | 168,062 | 1,580 | 3,563,390 | 12 | 10,159 | 104 | 131,941 | 116 | 142,100 |
| 8 | Ahmadnagar .. .. .. | 1,222 | 3,676,783 | 151 | 550,874 | 1,373 | 4,227,657 | 1,222 | 3,676,783 | .. | .... | 109½ | 444,552 | 1,331½ | 4,121,335 | .. | .... | 41½ | 106,322 | 41½ | 106,322 |
| 9 | Poona .. .. .. .. | 1,002¾ | 2,869,686 | 201¼ | 506,879 | 1,204 | 3,376,565 | 999¾ | 2,868,036 | .. | .... | 160¼ | 469,113 | 1,160 | 3,337,149 | 3 | 1,650 | 41 | 37,766 | 44 | 39,416 |
| 10 | Sholápur .. .. .. .. | 665 | 2,697,959 | 52 | 203,725 | 717 | 2,901,684 | 665 | 2,697,959 | .. | .... | 52 | 203,725 | 717 | 2,901,684 | .. | .... | .. | .... | .. | .... |
| 11 | Sátára .. .. .. .. | 960 | 2,454,304 | 394 | 625,605 | 1,354 | 3,079,909 | 960 | 2,454,304 | .. | .... | 265 | 494,329 | 1,225 | 2,948,633 | .. | .... | 129 | 131,276 | 129 | 131,276 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. | 892 | 2,276,089 | 241 | 545,387 | 1,133 | 2,821,476 | 892 | 2,276,089 | .. | .... | 183 | 540,039 | 1,075 | 2,816,128 | ... | .... | 58 | 5,348 | 58 | 5,348 |
| 13 | Bijápur .. .. .. .. | 1,011 | 3,205,891 | 162 | 421,995 | 1,173 | 3,627,886 | 1,011 | 3,205,891 | .. | .... | 154 | 388,106 | 1,165 | 3,593,997 | .. | .... | 8 | 33,889 | 8 | 33,889 |
| 14 | Dhárwár .. .. .. .. | 1,289 | 2,689,218 | 184 | 256,592 | 1,473 | 2,945,810 | 1,287 | 2,686,054 | 1 | 1,165 | 136 | 180,225 | 1,424 | 2,867,444 | 1 | 1,999 | 48 | 76,367 | 49 | 78,366 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | 1,881 | 2,399,373 | 103 | 116,360 | 1,984 | 2,515,733 | 1,862 | 2,378,791 | 5 | 3,847 | 27 | 33,198 | 1,894 | 2,415,836 | 14 | 16,735 | 76 | 83,162 | 90 | 99,897 |
| 16 | Kolába .. .. .. .. | 1,264 | 1,103,507 | 80 | 30,461 | 1,344 | 1,133,968 | 763 | 571,566 | 499 | 531,867 | 6 | 3,466 | 1,268 | 1,106,899 | 2 | 74 | 74 | 26,995 | 76 | 27,069 |
| 17 | Ratnágiri .. .. .. .. | 1,274½ | 2,385,000 | 63 | 118,536 | 1,337½ | 2,503,536 | 57 | 129,095 | 938½ | 1,619,058 | 18 | 31,924 | 1,013½ | 1,780,077 | 279 | 636,347 | 45 | 86,612 | 324 | 723,459 |
| 18 | Kánara .. .. .. .. | 1,349 | 2,481,611 | .. | .... | 1,349 | 2,481,611 | 1,269 | 2,353,321 | .. | .... | .. | .... | 1,269 | 2,353,321 | 80 | 128,290 | ... | .... | 80 | 128,290 |
| | Total A. ... | 20,779¼ | 43,312,768 | 2,193¾ | 4,202,961 | 22,973 | 47,515,729 | 17,686¾ | 37,733,371 | 2,301 | 4,016,413 | 1,318¾ | 3,191,471 | 21,306½ | 44,941,255 | 791½ | 1,562,984 | 875 | 1,011,490 | 1,666½ | 2,574,474 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. .. | 758 | 3,254,475 | 14 | 44,447 | 772 | 3,298,922 | 575 | 2,394,969 | .. | .... | .. | .... | 575 | 2,394,969 | 183 | 859,506 | 14 | 44,447 | 197 | 903,953 |
| 20 | Hyderabad .. .. .. .. | 1,335 | 5,320,738 | 62 | 284,777 | 1,397 | 5,605,515 | 1,215 | 4,139,852 | .. | .... | .. | .... | 1,215 | 4,139,852 | 120 | 1,180,886 | 62 | 284,777 | 182 | 1,465,663 |
| 21 | Shikárpur .. .. .. .. | 1,188 | 4,842,267 | 17 | 279,085 | 1,205 | 5,121,352 | 1,152 | 3,220,750 | .. | .... | 13 | 63,831 | 1,165 | 3,284,581 | 36 | 1,621,517 | 4 | 215,254 | 40 | 1,836,771 |
| 22 | Upper Sind Frontier .. .. | 228 | 661,335 | 6 | 27,333 | 234 | 688,668 | 228 | 661,335 | .. | .... | 6 | 27,333 | 234 | 688,668 | .. | .... | .. | .... | .. | .... |
| 23 | Thar and Párkar .. .. .. | 70 | 8,146,560 | .. | .... | 70 | 8,146,560 | .. | .... | .. | .... | .. | .... | .. | .... | 70 | 8,146,560 | .. | .... | 70 | 8,146,560 |
| | Total B. ... | 3,579 | 22,225,375 | 99 | 635,642 | 3,678 | 22,861,017 | 3,170 | 10,416,906 | ... | ... | 19 | 91,164 | 3,189 | 10,508,070 | 409 | 11,808,469 | 80 | 544,478 | 489 | 12,352,947 |
| | Grand Total ... | 24,358¼ | 65,538,143 | 2,292¾ | 4,838,603 | 26,651 | 70,376,746 | 20,856¾ | 48,150,277 | 2,301 | 4,016,413 | 1,337¾ | 3,282,635 | 24,495½ | 55,449,325 | 1,200½ | 13,371,453 | 955 | 1,555,968 | 2,155½ | 14,927,421 |

# II.—Area, Cultivated and Uncultivated, 1887-88.

| No. | District. | | Total Area as in Columns 5, 6 and 7 of Return No. 1. | Cultivated Area. Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. | Add Current Fallows. | Total Columns 5 and 6. | Detail of Column 7. Assessed Land. | Unassessed Land. | Uncultivated Area. Available for Cultivation. Assessed Land. | Unassessed Land. | Not available for Cultivation. Forest. | Other. | Total Columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | Acres. | | | | | Acres | | | | | | | Acres. |
| 1 | Ahmadabad ... | Rayatwári .. .. .. | 1,057,017 | 702,459 | 20,532 | 681,927 | 101,665 | 783,592 | 781,520 | 2,072 | 78,162 | 17,579 | .... | 177,684 | 273,425 |
| | | Other Government .. .. | 1,262,151 | 638,186 | 2,821 | 635,365 | 352,283 | 987,648 | 987,564 | 84 | .... | 6,427 | .... | 268,076 | 274,503 |
| | | Alienated .. .. .. .. | 98,917 | 81,217 | 184 | 81,033 | 17,803 | 98,836 | 98,836 | .... | .... | .... | .... | 81 | 81 |
| | | Total ... | 2,418,085 | 1,421,862 | 23,537 | 1,398,325 | 471,751 | 1,870,076 | 1,867,920 | 2,156 | 78,162 | 24,006 | ..... | 445,841 | 548,009 |
| 2 | Kaira ... ... | Rayatwári .. .. .. .. | 757,833 | 582,311 | 34,712 | 547,599 | 37,627 | 585,226 | 584,681 | 545 | 71,854 | 1,219 | .... | 99,534 | 172,607 |
| | | Other Government .. .. | 174,647 | 159,528 | 6,444 | 153,084 | 6,146 | 159,230 | 159,195 | 35 | 329 | .... | .... | 15,088 | 15,417 |
| | | Alienated .. .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. |
| | | Total ... | 932,480 | 741,839 | 41,156 | 700,683 | 43,773 | 744,456 | 743,876 | 580 | 72,183 | 1,219 | ..... | 114,622 | 188,024 |
| 3 | Panch Maháls... | Rayatwári .. .. .. | 666,672 | 288,751 | 56,000 | 232,751 | 39,145 | 271,896 | 269,707 | 2,189 | 100,108 | 164,150 | 84,138 | 46,380 | 394,776 |
| | | Other Government .. .. | 99,482 | 27,623 | 2,720 | 24,903 | 59,255 | 84,158 | 84,158 | .... | .... | .... | .... | 15,324 | 15,324 |
| | | Alienated .. .. .. .. | 27,793 | 15,234 | 142 | 15,092 | 10,355 | 25,447 | 25,447 | .... | .... | .... | .... | 2,346 | 2,346 |
| | | Total ... | 793,947 | 331,608 | 58,862 | 272,746 | 108,755 | 381,501 | 379,312 | 2,189 | 100,108 | 164,150 | 84,138 | 64,050 | 412,446 |
| 4 | Broach ... ... | Rayatwári .. .. .. | 916,536 | 556,482 | 699 | 555,783 | 87,320 | 643,103 | 636,879 | 6,224 | 27,453 | 4,403 | .... | 241,577 | 273,433 |
| | | Other Government .. .. | 1,179 | 982 | .... | 982 | 160 | 1,142 | 1,142 | .... | .... | .... | .... | 37 | 37 |
| | | Alienated .. .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. |
| | | Total ... | 917,715 | 557,464 | 699 | 556,765 | 87,480 | 644,245 | 638,021 | 6,224 | 27,453 | 4,403 | ..... | 241,614 | 273,470 |
| 5 | Surat ... ... | Rayatwári .. .. .. .. | 1,014,411 | 522,049 | 64,438 | 457,611 | 268,162 | 725,773 | 724,649 | 1,124 | 34,753 | 29,983 | 43,508 | 180,394 | 288,638 |
| | | Other Government .. .. | 12,235 | 5,598 | 409 | 5,189 | 5,166 | 10,355 | 10,355 | .... | .... | 759 | .... | 1,121 | 1,880 |
| | | Alienated .. .. .. .. | 5,254 | 3,801 | 53 | 3,748 | 1,358 | 5,106 | 5,106 | .... | .... | .... | .... | 148 | 148 |
| | | Total ... | 1,031,900 | 531,448 | 64,900 | 466,548 | 274,686 | 741,234 | 740,110 | 1,124 | 34,753 | 30,742 | 43,508 | 181,663 | 290,666 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. .. .. | 4,627,685 | 2,729,677 | 11,559 | 2,718,118 | 281,532 | 2,999,650 | 2,994,427 | 5,223 | 479,354 | 276,427 | 280,499 | 591,255 | 1,628,035 |
| | | Other Government ... .. | 310,782 | 66,898 | 10 | 66,888 | 2,321 | 69,209 | 939 | 68,240 | .... | 143,722 | 92,355 | 5,496 | 241,573 |
| | | Alienated .. .. .. .. | 102,768 | 66,342 | 236 | 66,106 | 10,372 | 76,478 | 76,442 | 36 | 10,091 | 4,352 | 3 | 11,844 | 26,290 |
| | | Total ... | 5,041,235 | 2,862,917 | 11,805 | 2,851,112 | 294,225 | 3,145,337 | 3,071,838 | 73,499 | 489,945 | 424,501 | 372,857 | 608,595 | 1,895,898 |
| 7 | Násik ... ... | Rayatwári .. .. .. .. | 3,395,328 | 1,863,878 | 32,602 | 1,831,276 | 346,594 | 2,177,870 | 2,177,466 | 404 | 146,188 | 34,881 | 721,589 | 314,800 | 1,217,458 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. |
| | | Alienated .. .. .. .. | 168,062 | 104,481 | 989 | 103,492 | 19,244 | 122,736 | 122,715 | 21 | 12,435 | 8,874 | 2,299 | 21,718 | 45,326 |
| | | Total ... | 3,563,390 | 1,968,359 | 33,591 | 1,934,768 | 365,838 | 2,300,606 | 2,300,181 | 425 | 158,623 | 43,755 | 723,888 | 336,518 | 1,262,784 |
| 8 | Ahmadnagar ... | Rayatwári .. .. .. .. | 3,676,783 | 2,324,813 | 33,524 | 2,291,289 | 367,830 | 2,659,119 | 2,658,393 | 726 | 99,778 | 10,339 | 519,157 | 388,390 | 1,017,664 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. |
| | | Alienated .. .. .. .. | 444,552 | 311,192 | 1,852 | 309,340 | 53,581 | 362,921 | 362,919 | 2 | 12,624 | 2,659 | 241 | 66,107 | 81,631 |
| | | Total ... | 4,121,335 | 2,636,005 | 35,376 | 2,600,629 | 421,411 | 3,022,040 | 3,021,312 | 728 | 112,402 | 12,998 | 519,398 | 454,497 | 1,099,295 |
| 9 | Poona ... ... | Rayatwári .. .. .. .. | 2,868,036 | 1,817,338 | 54,170 | 1,763,668 | 289,752 | 2,053,420 | 2,052,268 | 1,152 | 41,620 | 2,132 | 379,820 | 391,044 | 814,616 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. |
| | | Alienated .. .. .. .. | 469,113 | 325,768 | 11,727 | 314,041 | 56,019 | 370,060 | 370,041 | 19 | 2,374 | .... | 1,253 | 95,426 | 99,053 |
| | | Total ... | 3,337,149 | 2,143,606 | 65,897 | 2,077,709 | 345,771 | 2,423,480 | 2,422,309 | 1,171 | 43,994 | 2,132 | 381,073 | 486,470 | 913,669 |
| 10 | Sholápur ... | Rayatwári .. .. .. .. | 2,697,959 | 1,968,379 | 25,440 | 1,942,939 | 329,065 | 2,272,004 | 2,271,617 | 387 | 31,499 | 6,541 | 173,097 | 214,818 | 425,955 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. |
| | | Alienated .. .. .. .. | 203,725 | 145,090 | 1,907 | 143,183 | 23,830 | 167,013 | 166,976 | 37 | 252 | 3,738 | .... | 32,722 | 36,712 |
| | | Total ... | 2,901,684 | 2,113,469 | 27,347 | 2,086,122 | 352,895 | 2,439,017 | 2,438,593 | 424 | 31,751 | 10,279 | 173,097 | 247,540 | 462,667 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Sátára ... | Rayatwári ... | 2,454,304 | 1,557,634 | 89,754 | 1,467,880 | 299,569 | 1,767,449 | 1,766,944 | 505 | 29,393 | 8,410 | 423,433 | 225,619 | 686,855 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 494,329 | 327,403 | 24,365 | 303,038 | 102,944 | 405,982 | 405,978 | 4 | 428 | 7,844 | 12,635 | 67,440 | 88,347 |
| | | Total ... | 2,948,633 | 1,885,037 | 114,119 | 1,770,918 | 402,513 | 2,173,431 | 2,172,922 | 509 | 29,821 | 16,254 | 436,068 | 293,059 | 775,202 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 2,276,089 | 1,434,801 | 29,971 | 1,404,830 | 235,316 | 1,640,146 | 1,639,690 | 456 | 81,946 | 26,178 | 383,340 | 144,479 | 635,943 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 540,039 | 327,936 | 4,278 | 323,658 | 90,678 | 414,336 | 414,223 | 113 | 42,291 | 3,203 | 20,497 | 59,712 | 125,703 |
| | | Total ... | 2,816,128 | 1,762,737 | 34,249 | 1,728,488 | 325,994 | 2,054,482 | 2,053,913 | 569 | 124,237 | 29,381 | 403,837 | 204,191 | 761,646 |
| 13 | Bijápur ... | Rayatwári ... | 3,205,891 | 2,368,319 | 3,343 | 2,364,976 | 317,132 | 2,682,108 | 2,682,044 | 64 | 171,418 | 22,340 | 162,405 | 167,620 | 523,783 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 388,106 | 276,171 | 210 | 275,961 | 81,522 | 357,483 | 357,465 | 18 | 920 | 4,152 | ..... | 25,551 | 30,623 |
| | | Total ... | 3,593,997 | 2,644,490 | 3,553 | 2,640,937 | 398,654 | 3,039,591 | 3,039,509 | 82 | 172,338 | 26,492 | 162,405 | 193,171 | 554,406 |
| 14 | Dhárwár ... | Rayatwári ... | 2,686,054 | 1,972,027 | 28,956 | 1,943,071 | 216,720 | 2,159,791 | 2,159,596 | 195 | 61,179 | 4 | 275,802 | 189,278 | 526,263 |
| | | Other Government ... | 1,165 | 358 | ..... | 358 | 89 | 447 | 447 | ..... | 647 | ..... | ..... | 71 | 718 |
| | | Alienated ... | 180,225 | 109,902 | 1,654 | 108,248 | 40,503 | 148,751 | 148,721 | 30 | 129 | 11,433 | ..... | 19,912 | 31,474 |
| | | Total ... | 2,867,444 | 2,082,287 | 30,610 | 2,051,677 | 257,312 | 2,308,989 | 2,308,764 | 225 | 61,955 | 11,437 | 275,802 | 209,261 | 558,455 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 2,373,791 | 519,430 | 6,433 | 512,997 | 471,411 | 984,408 | 974,698 | 9,710 | 43,267 | 120,983 | 362,027 | 868,106 | 1,394,383 |
| | | Other Government ... | 3,847 | 1,072 | 7 | 1,065 | 1,059 | 2,124 | 2,124 | ..... | ..... | 1,196 | ..... | 527 | 1,723 |
| | | Alienated ... | 33,198 | 8,330 | 50 | 8,280 | 9,896 | 18,086 | 18,086 | ..... | 2 | 6,120 | 1,303 | 7,687 | 15,112 |
| | | Total ... | 2,415,836 | 528,832 | 6,490 | 522,342 | 482,276 | 1,004,618 | 994,908 | 9,710 | 43,269 | 128,299 | 363,330 | 876,320 | 1,411,218 |
| 16 | Kolába ... | Rayatwári ... | 571,566 | 179,023 | 4,831 | 174,192 | 113,709 | 287,901 | 286,709 | 1,192 | 6,026 | 36,560 | 122,908 | 118,171 | 283,665 |
| | | Other Government ... | 531,867 | 192,682 | 4,622 | 188,060 | 114,119 | 302,179 | 302,136 | 43 | ..... | 5,240 | 81,203 | 143,245 | 229,688 |
| | | Alienated ... | 3,466 | 1,154 | 6 | 1,148 | 1,200 | 2,348 | 2,348 | ..... | ..... | 608 | ..... | 510 | 1,118 |
| | | Total ... | 1,106,899 | 372,859 | 9,459 | 363,400 | 229,028 | 592,428 | 591,193 | 1,235 | 6,026 | 42,408 | 204,111 | 261,926 | 514,471 |
| 17 | Ratnágiri ... | Rayatwári ... | 129,095 | 39,512 | 1,252 | 38,260 | 40,068 | 78,328 | 78,327 | 1 | 386 | 2,040 | 5,036 | 43,305 | 50,767 |
| | | Other Government ... | 1,619,058 | 428,667 | 22,944 | 405,723 | 735,119 | 1,140,842 | 1,140,733 | 109 | 625 | 6,336 | 20,704 | 450,551 | 478,216 |
| | | Alienated ... | 31,924 | 14,701 | 620 | 14,081 | 8,210 | 22,291 | 22,291 | ..... | 6 | 999 | ..... | 8,628 | 9,633 |
| | | Total ... | 1,780,077 | 482,880 | 24,816 | 458,064 | 783,397 | 1,241,461 | 1,241,351 | 110 | 1,017 | 9,375 | 25,740 | 502,484 | 538,616 |
| 18 | Kánara... | Rayatwári ... | 2,353,321 | 234,534 | 12,488 | 222,046 | 81,066 | 303,112 | 302,289 | 823 | 56,241 | 787,434 | 913,877 | 292,657 | 2,050,209 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,353,321 | 234,534 | 12,488 | 222,046 | 81,066 | 303,112 | 302,289 | 823 | 56,241 | 787,434 | 913,877 | 292,657 | 2,050,209 |
| | Total A. ... | Rayatwári ... | 37,733,371 | 21,661,917 | 510,704 | 21,151,213 | 3,923,683 | 25,074,896 | 25,041,904 | 32,992 | 1,561,125 | 1,551,603 | 4,860,636 | 4,695,111 | 12,658,475 |
| | | Other Government ... | 4,016,413 | 1,521,594 | 39,977 | 1,481,617 | 1,275,717 | 2,757,334 | 2,688,823 | 68,511 | 1,601 | 163,680 | 194,262 | 899,536 | 1,259,079 |
| | | Alienated ... | 3,191,471 | 2,118,722 | 48,273 | 2,070,449 | 527,425 | 2,597,874 | 2,597,594 | 280 | 81,552 | 53,982 | 38,231 | 419,832 | 593,597 |
| | | Total ... | 44,941,255 | 25,302,233 | 598,954 | 24,703,279 | 5,726,825 | 30,430,104 | 30,328,321 | 101,783 | 1,644,278 | 1,769,265 | 5,083,129 | 6,014,479 | 14,511,151 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | 2,394,969 | 284,830 | 21,303 | 263,527 | 331,595 | 595,122 | ..... | ..... | 402,220 | | 73,078 | 1,324,549 | 1,799,847 |
| 20 | Hyderabad ... | | 4,139,852 | 643,670 | 6,691 | 636,979 | 1,065,282 | 1,702,261 | ..... | ..... | 1,695,197 | | 5,150 | 737,244 | 2,437,591 |
| 21 | Shikárpur ... | | 3,284,581 | 685,695 | 69,778 | 615,917 | 655,784 | 1,271,701 | ..... | ..... | 1,062,278 | | 683,213 | 267,389 | 2,012,880 |
| 22 | Upper Sind Frontier ... | | 688,668 | 139,084 | 5,921 | 133,163 | 268,822 | 401,985 | ..... | ..... | 150,159 | | 32,935 | 103,589 | 286,683 |
| 23 | Thar and Párkar ... | | Not available. | | | | | | | | | | | | |
| | | Total B. ... | 10,508,070 | 17,53,279 | 103,693 | 1,649,586 | 2,321,483 | 3,971,069 | ..... | ..... | 3,309,854 | | 794,376 | 2,432,771 | 6,537,001 |
| | | Grand Total ... | 55,449,325 | 27,055,512 | 702,647 | 26,352,865 | 8,048,308 | 34,401,173 | ..... | ..... | 6,723,397 | | 5,877,505 | 8,447,250 | 21,048,152 |

# III.—Crops, 1887-88.

| No. | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet), Sorghum vulgare, &c. | Bájrí (Spiked Millet), Penicillaria spicata. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu), Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Makai), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rágí (Nágli), Eleusine coracana. | Béla, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum miliaceum, P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum pilosum. | Amaranth (Rájgira), Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | crés. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 147,030 | 127,512 | 63,619 | 76,422 | 15,089 | 3,197 | 12,353 | 3,137 | 104 | 6,295 | 4,718 | ..... | 11 | ..... | 459,987 |
| | | Other Government ... ... | 117,495 | 76,211 | 14,252 | 107,790 | 5,467 | 593 | 6,010 | 662 | 40 | 7,010 | 8,676 | ..... | ..... | ..... | 344,206 |
| | | Alienated ... ... ... | 9,109 | 5,421 | 1,549 | 6,128 | 279 | 165 | 356 | 25 | ..... | 219 | 350 | ..... | ..... | ..... | 23,601 |
| | | Total ... | 273,634 | 209,144 | 79,420 | 190,340 | 20,835 | 3,955 | 19,219 | 3,824 | 144 | 13,524 | 13,744 | ... | 11 | ... | 827,794 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 50,373 | 140,733 | 124,283 | 25,305 | 7,515 | 356 | 75,028 | 54,165 | 308 | 1,024 | 968 | ..... | 143 | 26 | 430,227 |
| | | Other Government ... ... | 16,458 | 44,993 | 15,002 | 1,486 | 409 | 43 | 30,981 | 10,913 | 85 | 762 | 39 | ..... | 12 | ..... | 121,183 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 66,831 | 185,726 | 139,285 | 26,791 | 7,924 | 399 | 106,009 | 65,078 | 393 | 1,786 | 1,007 | ... | 155 | 26 | 601,410 |
| 3 | Pauch Maháls... | Rayatwári ... ... ... | 1,850 | 31,147 | 44,305 | 16,520 | 792 | 66,014 | 15,999 | 13,120 | ..... | 2,127 | 10,611 | 174 | 10 | 492 | 203,161 |
| | | Other Government ... ... | 521 | 3,751 | 7,184 | 1,238 | 71 | 3,901 | 3,074 | 1,183 | ..... | 151 | 576 | ..... | 1 | ..... | 21,651 |
| | | Alienated ... ... ... | 203 | 4,675 | 4,263 | 91 | ..... | 7 | 1,479 | 1,014 | ..... | 4 | 1,098 | ..... | 1 | ..... | 12,835 |
| | | Total ... | 2,574 | 39,573 | 55,752 | 17,849 | 863 | 69,922 | 20,552 | 15,317 | ... | 2,282 | 12,285 | 174 | 12 | 492 | 237,647 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 107,284 | 11,371 | 22,725 | 66,081 | ..... | 9 | 7,805 | 282 | 1 | 26 | ..... | ..... | 50 | ..... | 215,634 |
| | | Other Government ... ... | 184 | ..... | 25 | 123 | ..... | ..... | 10 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 342 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 107,468 | 11,371 | 22,750 | 66,204 | ... | 9 | 7,815 | 282 | 1 | 26 | ... | ... | 50 | ... | 215,976 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 89,142 | 6,312 | 103,503 | 32,729 | ..... | 1 | 35,421 | 13,126 | ..... | 102 | 666 | 146 | 18 | 1,362 | 282,528 |
| | | Other Government ... ... | 1,379 | 1 | 1,007 | 169 | ..... | ..... | 452 | 85 | ..... | ..... | ..... | ..... | ..... | ..... | 3,093 |
| | | Alienated ... ... ... | 2,742 | 12 | 269 | 232 | ..... | ..... | 96 | 60 | ..... | ..... | ..... | ..... | ..... | ..... | 3,411 |
| | | Total ... | 93,263 | 6,325 | 104,779 | 33,130 | ... | 1 | 35,969 | 13,271 | ... | 102 | 666 | 146 | 18 | 1,362 | 289,032 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 457,112 | 543,965 | 13,972 | 379,757 | 7 | 1,621 | 2,966 | 8,486 | 317 | 3,787 | 1,035 | 1,087 | 252 | ..... | 1,414,364 |
| | | Other Government ... ... | 6,696 | 9,765 | 7,656 | 12,462 | ..... | 1,634 | 2,023 | 2,242 | 61 | 629 | 1,653 | 914 | ..... | 2,869 | 48,604 |
| | | Alienated ... ... ... | 16,246 | 9,328 | 408 | 6,375 | ..... | 153 | 1 | 322 | 1 | 209 | 31 | 32 | 57 | ..... | 33,163 |
| | | Total ... | 480,054 | 563,058 | 22,036 | 398,594 | 7 | 3,408 | 4,990 | 11,050 | 379 | 4,625 | 2,719 | 2,033 | 309 | 2,869 | 1,496,131 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 89,860 | 662,451 | 45,254 | 343,092 | ..... | 1,835 | 2 | 152,371 | 1,415 | 48,862 | 1 | 1,691 | 124 | ..... | 1,346,958 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 3,907 | 30,718 | 2,821 | 33,832 | ..... | 106 | ..... | 6,845 | 77 | 1,802 | ..... | 113 | 7 | ..... | 80,228 |
| | | Total ... | 93,767 | 693,169 | 48,075 | 376,924 | ... | 1,941 | 2 | 159,216 | 1,492 | 50,664 | 1 | 1,804 | 131 | ... | 1,427,186 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 793,283 | 800,683 | 9,286 | 256,019 | 73 | 432 | 39 | 26,523 | 1,502 | 9,652 | 8 | 5,246 | 315 | 449 | 1,903,510 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 128,317 | 93,756 | 305 | 27,946 | 17 | 82 | ..... | 11 | 224 | 2 | ..... | 44 | 4 | 1 | 250,709 |
| | | Total ... | 921,600 | 894,439 | 9,591 | 283,965 | 90 | 514 | 39 | 26,534 | 1,726 | 9,654 | 8 | 5,290 | 319 | 450 | 2,154,219 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 659,911 | 576,927 | 52,555 | 105,069 | 626 | 2,185 | 38 | 61,977 | 1,344 | 34,078 | 223 | 4,339 | 392 | 1,170 | 1,500,834 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 98,390 | 137,537 | 7,387 | 19,664 | 68 | 93 | ..... | 4,355 | 164 | 1,871 | 3 | 809 | ..... | 1,100 | 271,441 |
| | | Total ... | 758,301 | 714,464 | 59,942 | 124,733 | 694 | 2,278 | 38 | 66,332 | 1,508 | 35,949 | 226 | 5,148 | 392 | 2,270 | 1,772,275 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... ... | 1,161,372 | 226,609 | 25,763 | 55,201 | 1,005 | 13,109 | 5 | 32 | 1,132 | 939 | 4 | 223 | 43 | 6,762 | 1,492,199 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 84,812 | 24,443 | 1,059 | 3,560 | 21 | 1,107 | ..... | ..... | 88 | 128 | ..... | ..... | ..... | 419 | 115,637 |
| | | Total ... | 1,246,184 | 251,052 | 26,822 | 58,761 | 1,026 | 14,216 | 5 | 32 | 1,220 | 1,067 | 4 | 223 | 43 | 7,181 | 1,607,836 |
| 11 | Sátára ... | Rayatwári ... ... ... | 428,226 | 492,252 | 29,715 | 54,946 | 3,709 | 6,695 | 95 | 54,563 | 22,222 | 38,101 | ..... | 1,139 | 458 | 239 | 1,132,360 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 91,331 | 80,647 | 11,954 | 12,769 | 923 | 1,856 | ..... | 17,364 | 8,229 | 11,954 | ..... | 311 | 491 | 1 | 237,830 |
| | | Total ... | 519,557 | 572,899 | 41,669 | 67,715 | 4,632 | 8,551 | 95 | 71,927 | 30,451 | 50,055 | ..... | 1,450 | 949 | 240 | 1,370,190 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 524,994 | 131,079 | 99,694 | 96,010 | 233 | 4,876 | 43 | 47,543 | 71,846 | 23,655 | ..... | ..... | ..... | 9 | 999,982 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 134,177 | 44,671 | 7,785 | 16,786 | 56 | 1,189 | 2 | 7,145 | 13,060 | 4,403 | ..... | ..... | ..... | ..... | 229,274 |
| | | Total ... | 659,171 | 175,750 | 107,479 | 112,796 | 289 | 6,065 | 45 | 54,688 | 84,906 | 28,058 | ..... | ..... | ..... | 9 | 1,229,256 |
| 13 | Bijápur... | Rayatwári .. ... ... | 1,136,599 | 286,739 | 9,941 | 170,588 | 11 | 509 | 42 | 117 | 29,135 | 6,980 | ..... | ..... | ..... | ..... | 1,640,661 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 138,034 | 27,651 | 534 | 14,626 | 3 | 121 | 4 | 19 | 5,374 | 895 | ..... | ..... | ..... | ..... | 187,261 |
| | | Total ... | 1,274,633 | 314,390 | 10,475 | 185,214 | 14 | 630 | 46 | 136 | 34,509 | 7,875 | ..... | ..... | ..... | ..... | 1,827,922 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 587,949 | 5,839 | 129,646 | 256,131 | 29 | 44 | 78 | 45,070 | 98,915 | 31,448 | ..... | ..... | ..... | ..... | 1,155,149 |
| | | Other Government ... ... | 184 | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 55 | 5 | ..... | ..... | ..... | ..... | 246 |
| | | Alienated ... ... ... | 34,329 | 429 | 16,676 | 10,048 | ..... | 2 | ..... | 4,770 | 6,299 | 2,096 | ..... | ..... | ..... | ..... | 74,649 |
| | | Total ... | 622,462 | 6,269 | 146,323 | 266,179 | 29 | 46 | 78 | 49,840 | 105,269 | 33,549 | ..... | ..... | ..... | ..... | 1,230,044 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... ... ... | 137 | ..... | 323,270 | 115 | ..... | 61 | 14,993 | 73,240 | ..... | 32,197 | ..... | ..... | ..... | ..... | 444,013 |
| | | Other Government ... ... | ..... | ..... | 935 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 935 |
| | | Alienated ... ... ... | ..... | ..... | 7,398 | ..... | ..... | ..... | 20 | 320 | ..... | 148 | ..... | ..... | ..... | ..... | 7,886 |
| | | Total ... | 137 | ..... | 331,603 | 115 | ..... | 61 | 15,013 | 73,560 | ..... | 32,345 | ..... | ..... | ..... | ..... | 452,834 |
| 16 | Kolába ... | Rayatwári ... ... ... | ..... | ..... | 139,484 | 4 | ..... | ..... | 2,637 | 13,604 | ..... | 10,257 | ..... | ..... | ..... | ..... | 165,986 |
| | | Other Government ... ... | ..... | ..... | 59,712 | ..... | ..... | ..... | 24,023 | 47,463 | ..... | 39,487 | ..... | ..... | ..... | ..... | 170,685 |
| | | Alienated ... ... ... | ..... | ..... | 963 | ..... | ..... | ..... | ..... | 83 | ..... | 84 | ..... | ..... | ..... | ..... | 1,130 |
| | | Total ... | ..... | ..... | 200,159 | 4 | ..... | ..... | 26,660 | 61,150 | ..... | 49,828 | ..... | ..... | ..... | ..... | 337,801 |
| 17 | Ratnágiri ... | Rayatwári ... ... ... | ..... | ..... | 10,986 | ..... | ..... | ..... | 6,516 | 8,109 | ..... | 3,765 | ..... | ..... | ..... | ..... | 29,376 |
| | | Other Government ... ... | ..... | ..... | 122,224 | ..... | ..... | ..... | 89,431 | 110,416 | ..... | 62,815 | ..... | ..... | ..... | ..... | 384,886 |
| | | Alienated ... ... ... | ..... | ..... | 4,555 | ..... | ..... | ..... | 2,151 | 2,930 | ..... | 1,972 | ..... | ..... | ..... | ..... | 11,608 |
| | | Total ... | ..... | ..... | 137,765 | ..... | ..... | ..... | 98,098 | 121,455 | ..... | 68,552 | ..... | ..... | ..... | ..... | 425,870 |
| 18 | Kanára... | Rayatwári ... .. ... | 1,318 | ..... | 181,508 | ..... | ..... | 26 | ..... | 7,436 | 602 | 761 | ..... | ..... | ..... | 3 | 191,654 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 1,318 | ..... | 181,508 | ..... | ..... | 26 | ..... | 7,436 | 602 | 761 | ..... | ..... | ..... | 3 | 191,654 |
| | Total A. ... | Rayatwári ... ... ... | 6,236,140 | 4,043,619 | 1,429,509 | 1,933,989 | 29,089 | 100,970 | 174,560 | 582,901 | 228,843 | 254,056 | 18,234 | 14,045 | 1,816 | 10,512 | 15,058,583 |
| | | Other Government ... ... | 142,917 | 134,722 | 227,998 | 123,268 | 5,947 | 6,171 | 156,004 | 172,964 | 241 | 110,859 | 10,944 | 914 | 13 | 2,369 | 1,095,831 |
| | | Alienated ... ... ... | 741,597 | 459,288 | 67,926 | 152,057 | 1,367 | 4,881 | 4,109 | 45,263 | 33,546 | 25,787 | 1,482 | 1,309 | 560 | 1,521 | 1,540,663 |
| | | Total ... | 7,120,954 | 4,637,629 | 1,725,433 | 2,209,314 | 36,403 | 112,022 | 334,673 | 801,128 | 262,600 | 390,702 | 30,660 | 16,268 | 2,389 | 14,902 | 17,695,077 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 41,657 | 17,612 | 133,542 | 30,582 | 4,803 | 435 | ..... | 610 | 13 | 8 | ..... | ..... | ..... | 9 | 229,271 |
| 20 | Hyderabad... ... ... ... ... | | 86,323 | 214,871 | 151,086 | 30,894 | ..... | ..... | ..... | 23 | ..... | ..... | ..... | ..... | ..... | 3,647 | 486,844 |
| 21 | Shikárpur ... ... ... ... ... | | 245,524 | 21,875 | 154,781 | 127,230 | ..... | ..... | ..... | 207 | ..... | ..... | ..... | ..... | ..... | 2,355 | 551,972 |
| 22 | Upper Sind Frontier ... ... ... | | 61,785 | 5,730 | 9,784 | 12,176 | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | 373 | 89,850 |
| 23 | Thar and Parkar ... ... ... ... | | Not available. | | | | | | | | | | | | | | |
| | | Total B. ... | 435,289 | 260,088 | 449,193 | 200,882 | 4,803 | 435 | ..... | 842 | 13 | 8 | ..... | ..... | ..... | 6,384 | 1,357,937 |
| | | Grand Total ... | 7,556,243 | 4,897,717 | 2,174,626 | 2,410,196 | 41,206 | 112,457 | 334,673 | 801,970 | 262,613 | 390,710 | 30,660 | 16,268 | 2,389 | 21,286 | 19,053,014 |

## III.—Crops, 1887-88—*continued.*

| No. | District. | | II.—Pulses. | | | | | | | | | | | | | | III.—Orchard and Garden Produce. | | | | | IV.—Drugs and Narcotics. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Turi (Pigeon Pea), Cajanus indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram), Phaseolus radiatus. | Muth (Kidney Bean), Phaseolus aconitifolius. | Val (large-fruited Dolichos), Dolichos lablab. | Chavli (Small-fruited Dolichos), Dolichos catiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lákh lang), Lathyrus sativus. | Field Vetch (Guvár), Cyamopsis psoraliodes. | Others. | Total II. | A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | Tobacco (Tambákhu), Nicotiana tabacum. | Bhang, Gánja (Indian hemp), Cannabis sativa. | Opium (Afu), Papaver somniferum. | Coffee (Káfi), Bund), Coffea arabica. | Tea (Chaha), Thea sinensis. | Cinchona officinalis. | Others. | Total IV. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 2,015 | 6,571 | 6,442 | 2,762 | 28,516 | 54 | 229 | 171 | 6 | ... | ... | 4,059 | ... | 50,825 | 606 | 1,583 | 428 | 1,486 | 4,103 | 2,060 | ... | ... | ... | ... | ... | ... | 2,060 |
| | | Other Government... | 946 | 7,734 | 10,350 | 3,344 | 15,922 | 127 | 375 | 10,724 | ... | ... | ... | 3,399 | ... | 52,921 | 256 | 232 | 1,008 | 118 | 1,614 | 333 | ... | ... | ... | ... | ... | ... | 333 |
| | | Alienated ... | 5 | 395 | 682 | 77 | 1,122 | ... | 11 | 660 | ... | ... | ... | 48 | ... | 3,000 | ... | 14 | ... | 2 | 16 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| | | Total ... | 2,966 | 14,700 | 17,474 | 6,183 | 45,560 | 181 | 615 | 11,555 | 6 | ... | ... | 7,506 | ... | 106,746 | 862 | 1,829 | 1,436 | 1,606 | 5,733 | 2,394 | ... | ... | ... | ... | ... | ... | 2,394 |
| 2 | Kaira ... | Rayatwári ... | 18,643 | 8,563 | 3,446 | 505 | 26,199 | 639 | 3,060 | ... | ... | ... | ... | 5,467 | ... | 66,522 | 520 | 702 | 6,574 | 185 | 7,981 | 7,326 | ... | ... | ... | ... | ... | ... | 7,326 |
| | | Other Government... | 7,463 | 276 | 449 | 181 | 6,033 | 210 | 208 | ... | ... | ... | ... | 2,101 | ... | 16,921 | 443 | 292 | 1,049 | 81 | 1,865 | 9,778 | ... | ... | ... | ... | ... | ... | 9,778 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 26,106 | 8,839 | 3,895 | 686 | 32,232 | 849 | 3,268 | ... | ... | ... | ... | 7,568 | ... | 83,443 | 963 | 994 | 7,623 | 266 | 9,846 | 17,104 | ... | ... | ... | ... | ... | ... | 17,104 |
| 3 | Panch Máhals ... | Rayatwári ... | 3,368 | 40,797 | 2,128 | 4,115 | 1,986 | 23 | 177 | 5 | 705 | ... | ... | 637 | ... | 53,941 | 121 | 150 | 360 | 32 | 663 | 512 | ... | ... | ... | ... | ... | ... | 512 |
| | | Other Government... | 576 | 1,402 | 328 | 759 | 581 | 8 | 127 | ... | 206 | ... | ... | 64 | ... | 4,051 | 29 | 53 | 3 | 1 | 86 | 134 | ... | ... | ... | ... | ... | ... | 134 |
| | | Alienated ... | 552 | 75 | 285 | 21 | 968 | 1 | 102 | ... | ... | ... | ... | 93 | ... | 2,097 | ... | ... | 22 | ... | 22 | 9 | ... | ... | ... | ... | ... | ... | 9 |
| | | Total ... | 4,496 | 42,274 | 2,741 | 4,895 | 3,535 | 32 | 406 | 5 | 911 | ... | ... | 794 | ... | 60,089 | 150 | 203 | 385 | 33 | 771 | 655 | ... | ... | ... | ... | ... | ... | 655 |
| 4 | Broach ... | Rayatwári ... | 11,966 | 1,819 | 370 | 39 | 2,911 | 1,087 | 297 | ... | 3,420 | ... | 43,393 | 420 | ... | 65,722 | 482 | 1,083 | 7,909 | 635 | 10,109 | 2,831 | ... | ... | ... | ... | ... | ... | 2,831 |
| | | Other Government... | 25 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 190 | ... | ... | 215 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 11,991 | 1,819 | 370 | 39 | 2,911 | 1,087 | 297 | ... | 3,420 | ... | 43,583 | 420 | ... | 65,937 | 482 | 1,083 | 7,909 | 635 | 10,109 | 2,831 | ... | ... | ... | ... | ... | ... | 2,831 |
| 5 | Surat ... | Rayatwári ... | 24,843 | 3,383 | 2,585 | 2,054 | 723 | 47,694 | 778 | 1 | 4,270 | 5 | 4,487 | 1,512 | ... | 92,335 | 483 | 1,858 | 46 | 692 | 3,079 | 748 | 17 | ... | ... | ... | ... | ... | 765 |
| | | Other Government... | 244 | 2 | 28 | ... | ... | 312 | 7 | ... | 14 | ... | 23 | 12 | ... | 642 | ... | 4 | ... | 1 | 5 | 6 | ... | ... | ... | ... | ... | ... | 6 |
| | | Alienated ... | 32 | ... | 10 | 17 | 1 | 74 | 3 | ... | ... | ... | 10 | 5 | ... | 152 | ... | 22 | ... | 1 | 23 | 11 | ... | ... | ... | ... | ... | ... | 11 |
| | | Total ... | 25,119 | 3,385 | 2,623 | 2,071 | 724 | 48,080 | 788 | 1 | 4,284 | 5 | 4,520 | 1,529 | ... | 93,129 | 483 | 1,884 | 46 | 694 | 3,107 | 765 | 17 | ... | ... | ... | ... | ... | 782 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 48,140 | 68,817 | 4,138 | 15,514 | 3,782 | 159 | 614 | 50,174 | 2,284 | 568 | 96 | ... | 24 | 194,310 | 1,787 | 3,300 | 19 | 3,474 | 8,580 | 5,737 | 14 | ... | ... | ... | ... | ... | 5,751 |
| | | Other Government... | 1,602 | 7,081 | 2 | 507 | ... | ... | ... | 224 | 21 | 178 | ... | ... | ... | 9,617 | 5 | 10 | ... | 8 | 23 | 44 | ... | ... | ... | ... | ... | ... | 44 |
| | | Alienated ... | 1,053 | 2,220 | 108 | 329 | 92 | ... | 11 | 170 | 25 | 12 | ... | ... | ... | 4,020 | 255 | 170 | ... | 270 | 695 | 170 | ... | ... | ... | ... | ... | ... | 170 |
| | | Total ... | 50,795 | 78,118 | 4,248 | 16,350 | 3,874 | 159 | 625 | 50,568 | 2,330 | 758 | 96 | ... | 24 | 207,945 | 2,047 | 3,480 | 19 | 3,752 | 9,298 | 5,951 | 14 | ... | ... | ... | ... | ... | 5,965 |
| 7 | Násik ... | Rayatwári ... | 19,669 | 86,177 | 2,586 | 25,285 | 2,570 | 14 | 29 | 60,775 | 2,243 | 6,575 | 2,664 | ... | ... | 208,587 | 3,819 | 2,762 | 135 | 1,915 | 8,631 | 1,362 | 6 | ... | ... | ... | ... | ... | 1,368 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,318 | 5,773 | 16 | 593 | 2 | 1 | ... | 1,629 | 310 | 740 | 390 | ... | ... | 10,772 | 723 | 518 | 32 | 135 | 1,408 | 84 | 1 | ... | ... | ... | ... | ... | 85 |
| | | Total ... | 20,987 | 91,950 | 2,602 | 25,878 | 2,572 | 15 | 29 | 62,404 | 2,553 | 7,315 | 3,054 | ... | ... | 219,359 | 4,542 | 3,280 | 167 | 2,050 | 10,039 | 1,446 | 7 | ... | ... | ... | ... | ... | 1,453 |
| 8 | Ahmadnagar ... | Rayatwári ... | 41,728 | 110,302 | 10,079 | 3,456 | 21,188 | 1,548 | 89 | 41,944 | 1,395 | 269 | 78 | ... | 160 | 232,236 | 1,702 | 1,259 | 378 | 1,387 | 4,726 | 6,768 | 457 | ... | ... | ... | ... | ... | 7,225 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 7,067 | 15,686 | 488 | 41 | 3,785 | 23 | ... | 7,273 | 12 | ... | ... | ... | ... | 34,375 | 90 | 64 | 24 | 120 | 298 | 741 | 180 | ... | ... | ... | ... | ... | 921 |
| | | Total ... | 48,795 | 125,988 | 10,567 | 3,497 | 24,973 | 1,571 | 89 | 49,217 | 1,407 | 269 | 78 | ... | 160 | 266,611 | 1,792 | 1,323 | 402 | 1,507 | 5,024 | 7,509 | 637 | ... | ... | ... | ... | ... | 8,146 |
| 9 | Poona ... | Rayatwári ... | 22,717 | 61,887 | 2,086 | 4,177 | 23,618 | 4,776 | 306 | 27,439 | 1,504 | 1,270 | ... | ... | ... | 149,775 | 10,790 | 1,090 | 1,142 | 2,885 | 15,907 | 1,882 | 22 | ... | ... | ... | ... | ... | 1,904 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 5,467 | 12,007 | 219 | 869 | 3,938 | 388 | 8 | 5,163 | 203 | 131 | ... | ... | ... | 28,393 | 2,652 | 429 | 172 | 568 | 3,821 | 89 | 8 | ... | ... | ... | ... | ... | 97 |
| | | Total ... | 28,184 | 73,894 | 2,305 | 5,046 | 27,551 | 5,164 | 314 | 32,602 | 1,707 | 1,401 | ... | ... | ... | 178,168 | 13,442 | 1,519 | 1,314 | 3,453 | 19,728 | 1,971 | 30 | ... | ... | ... | ... | ... | 2,001 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. | 59,617 | 74,697 | 3,297 | 343 | 33,927 | 58 | 3 | 12,902 | 7 | 72 | 396 | .. | .. | 185,319 | 2,495 | 1,380 | 443 | 1,544 | 5,862 | 5,855 | 26 | .. | .. | .. | .. | .. | 5,881 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 2,899 | 6,066 | 36 | 6 | 3,119 | .. | .. | 1,116 | .. | .. | .. | .. | .. | 13,242 | 223 | 71 | 45 | 58 | 397 | 332 | .. | .. | .. | .. | .. | .. | 332 |
| | | Total ... | 62,516 | 80,763 | 3,333 | 349 | 37,046 | 58 | 3 | 14,018 | 7 | 72 | 396 | ... | ... | 198,561 | 2,718 | 1,451 | 488 | 1,602 | 6,259 | 6,187 | 26 | ... | ... | ... | ... | ... | 6,213 |
| 11 | Sátára ... | Rayatwári .. .. | 46,014 | 81,449 | 12,915 | 26,041 | 64,664 | 3,542 | 156 | 40,795 | 1,337 | 774 | .. | .. | .. | 277,687 | 5,025 | 810 | 727 | 1,371 | 7,933 | 8,233 | 170 | .. | 16 | .. | .. | .. | 8,419 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 10,670 | 17,083 | 2,404 | 7,808 | 8,152 | 843 | 97 | 8,341 | 341 | 256 | .. | .. | .. | 55,995 | 1,137 | 282 | 42 | 309 | 1,770 | 977 | 3 | .. | .. | .. | .. | .. | 980 |
| | | Total ... | 56,684 | 98,532 | 15,319 | 33,849 | 72,816 | 4,385 | 253 | 49,136 | 1,678 | 1,030 | ... | ... | ... | 333,682 | 6,162 | 1,092 | 769 | 1,680 | 9,703 | 9,210 | 173 | .. | 16 | ... | ... | ... | 9,399 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. | 49,595 | 42,279 | 6,527 | 3,815 | 3,825 | 5,046 | 202 | 45,255 | 5,341 | 4,904 | .. | .. | .. | 166,789 | 3,109 | 1,905 | 186 | 2,178 | 7,378 | 16,412 | .. | .. | 60 | .. | .. | .. | 16,472 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 12,819 | 11,150 | 2,727 | 594 | 1,872 | 800 | 111 | 9,953 | 185 | 161 | .. | .. | .. | 40,372 | 863 | 294 | 29 | 489 | 1,675 | 3,701 | .. | .. | 16 | .. | .. | .. | 3,717 |
| | | Total ... | 62,414 | 53,429 | 9,254 | 4,409 | 5,697 | 5,846 | 313 | 55,208 | 5,526 | 5,065 | ... | ... | ... | 207,161 | 3,972 | 2,199 | 215 | 2,667 | 9,053 | 20,113 | ... | ... | 76 | ... | ... | ... | 20,189 |
| 13 | Bijápur ... | Rayatwári .. .. | 70,824 | 60,034 | 29,861 | 2 | 7,412 | 3,989 | 3,355 | 24,340 | 32 | .. | .. | .. | .. | 199,849 | 1,379 | 1,139 | 76 | 2,365 | 4,959 | 2,618 | .. | .. | .. | .. | .. | .. | 2,618 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 8,356 | 4,835 | 3,559 | .. | 602 | 784 | 616 | 3,459 | 2 | .. | .. | .. | .. | 22,213 | 183 | 140 | 7 | 349 | 679 | 167 | .. | .. | .. | .. | .. | .. | 167 |
| | | Total ... | 79,180 | 64,869 | 33,420 | 2 | 8,014 | 4,773 | 3,971 | 27,799 | 34 | ... | ... | ... | ... | 222,062 | 1,562 | 1,279 | 83 | 2,714 | 5,638 | 2,785 | ... | ... | ... | ... | ... | ... | 2,785 |
| 14 | Dhárwár ... | Rayatwári .. .. | 52,108 | 44,448 | 40,377 | 3,718 | 11,230 | 5,769 | 862 | 48,680 | 467 | 87 | .. | .. | .. | 207,746 | 1,809 | 3,717 | 2 | 4,414 | 9,942 | 1,413 | .. | .. | .. | .. | .. | .. | 1,413 |
| | | Other Government .. | 11 | .. | 9 | .. | 12 | 1 | .. | 24 | .. | .. | .. | .. | .. | 57 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 3,148 | 1,952 | 2,353 | 138 | 446 | 403 | 70 | 3,316 | 76 | 1 | .. | .. | .. | 11,903 | 105 | 411 | .. | 582 | 1,098 | 97 | .. | .. | .. | .. | .. | .. | 97 |
| | | Total ... | 55,267 | 46,400 | 42,739 | 3,856 | 11,688 | 6,173 | 932 | 52,020 | 543 | 88 | ... | ... | ... | 219,706 | 1,914 | 4,128 | 2 | 4,996 | 11,040 | 1,510 | ... | ... | ... | ... | ... | ... | 1,510 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. | 6,146 | 3,213 | 659 | 22,487 | .. | 4,163 | 3,576 | 990 | 207 | 3 | 83 | .. | .. | 41,527 | 1,003 | 945 | 23 | 3,039 | 5,010 | 4 | .. | .. | .. | .. | ... | .. | 4 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | 129 | 137 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 58 | .. | .. | 33 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 91 | 20 | 33 | 3 | 201 | 257 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 6,204 | 3,213 | 659 | 22,520 | ... | 4,163 | 3,576 | 990 | 207 | 3 | 83 | ... | ... | 41,618 | 1,023 | 986 | 26 | 3,369 | 5,404 | 4 | ... | ... | ... | ... | ... | ... | 4 |
| 16 | Kolába ... | Rayatwári .. .. | 532 | 2,522 | 666 | 1,292 | .. | 3,695 | 39 | .. | .. | .. | .. | .. | .. | 8,746 | 54 | 312 | .. | 1,887 | 2,253 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Other Government .. | 2,156 | 1,124 | 1,611 | 8,134 | .. | 2,568 | 20 | .. | .. | .. | .. | .. | .. | 15,613 | 5 | 134 | .. | 2 | 141 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | .. | 18 | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 2,688 | 3,664 | 2,277 | 9,426 | ... | 6,269 | 59 | ... | ... | ... | ... | ... | ... | 24,383 | 59 | 446 | ... | 1,889 | 2,394 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri ... | Rayatwári .. .. | 25 | 5 | 89 | 782 | .. | 373 | 7 | 2,665 | .. | .. | .. | .. | .. | 3,946 | 5 | 19 | .. | 3,268 | 3,292 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Other Government .. | 1,874 | 115 | 1,079 | 6,620 | .. | 5,753 | 86 | 6,273 | .. | .. | .. | .. | .. | 21,800 | 245 | 509 | 2 | 4,604 | 5,360 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | 37 | .. | 327 | 289 | .. | 112 | 5 | 850 | .. | .. | .. | .. | .. | 1,620 | .. | 30 | .. | 249 | 279 | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 1,936 | 120 | 1,495 | 7,691 | ... | 6,238 | 98 | 9,788 | ... | ... | ... | ... | ... | 27,366 | 250 | 558 | 2 | 8,121 | 8,931 | ... | ... | ... | ... | ... | ... | ... | ... |
| 18 | Kánara ... | Rayatwári .. .. | 281 | 239 | 1,518 | 1,660 | .. | 145 | 2 | 2,698 | 336 | 2 | .. | .. | 165 | 7,046 | 356 | 606 | 1,594 | 18,039 | 20,595 | .. | .. | .. | 47 | .. | .. | .. | 47 |
| | | Other Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total ... | 281 | 239 | 1,518 | 1,660 | ... | 145 | 2 | 2,698 | 336 | 2 | ... | ... | 165 | 7,046 | 356 | 606 | 1,594 | 18,039 | 20,595 | ... | ... | ... | 47 | ... | ... | ... | 47 |
| | Total A. ... | Rayatwári .. .. | 478,231 | 697,202 | 129,769 | 118,047 | 232,546 | 82,774 | 13,781 | 358,834 | 23,554 | 14,529 | 51,197 | 12,095 | 349 | 2,212,908 | 35,545 | 24,620 | 20,042 | 50,796 | 131,003 | 63,761 | 712 | .. | 123 | .. | .. | .. | 64,596 |
| | | Other Government .. | 14,397 | 17,734 | 13,856 | 19,545 | 22,548 | 8,979 | 823 | 17,245 | 241 | 178 | 213 | 5,576 | .. | 121,835 | 983 | 1,242 | 2,062 | 4,944 | 9,231 | 10,295 | .. | .. | .. | .. | .. | .. | 10,295 |
| | | Alienated .. .. | 53,481 | 77,260 | 13,214 | 10,815 | 24,099 | 3,435 | 1,034 | 41,930 | 1,154 | 1,301 | 400 | 146 | .. | 228,269 | 6,251 | 2,478 | 376 | 3,333 | 12,438 | 6,379 | 192 | .. | 16 | .. | .. | .. | 6,587 |
| | | Total ... | 546,609 | 792,196 | 156,839 | 148,407 | 279,193 | 95,188 | 15,638 | 418,009 | 24,949 | 16,008 | 51,810 | 17,817 | 349 | 2,563,012 | 42,779 | 28,340 | 22480 | 59,073 | 152,672 | 80,435 | 904 | ... | 139 | ... | ... | ... | 81,478 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | ... | 3,377 | 13,553 | 963 | 8,539 | ... | ... | ... | ... | 402 | ... | ... | 3 | 26,837 | ... | ... | ... | ... | 4,845 | 318 | 90 | ... | ... | ... | ... | ... | 408 |
| 20 | Hyderabad... ... ... ... | | ... | 3,631 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 15,574 | 19,205 | ... | ... | ... | ... | 21,728 | 5,382 | ... | ... | ... | ... | ... | 14 | 5,396 |
| 21 | Shikárpur ... ... ... ... | | 2 | 10,983 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 36,306 | 47,291 | ... | ... | ... | ... | 13,047 | 3,000 | ... | ... | ... | ... | ... | 60 | 3,060 |
| 22 | Upper Sind Frontier ... ... | | ... | 2,420 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | 3,574 | 5,994 | ... | ... | ... | ... | 1,060 | 51 | ... | ... | ... | ... | ... | ... | 51 |
| 23 | Thar and Párkar ... ... ... | | Not | availa | ble. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total B. ... | | 2 | 20,411 | 13,553 | 963 | 8,539 | ... | ... | ... | ... | 402 | ... | ... | 55,457 | 99,327 | ... | ... | ... | ... | 40,680 | 8,751 | 90 | ... | ... | ... | ... | 74 | 8,915 |
| | Grand Total ... | | 546,611 | 812,607 | 170,392 | 149,370 | 287,732 | 95,188 | 15,638 | 418,009 | 24,949 | 16,410 | 51,810 | 17,817 | 55,806 | 2,662,339 | ... | ... | ... | ... | 193,352 | 89,186 | 994 | ... | 139 | ... | ... | 74 | 90,393 |

# III.—Crops, 1887-88—*continued.*

| No. | District. | | V.—Condiments and Spices. | | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cardamom (Veldode), Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (A'le), Zingiber officinale. | Black Pepper (Miri), Piper nigrum. | Betel leaves (Páne), Piper-betel. | Betelnut (Supári), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bálant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jire), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Rái), Sinapis indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us, Sherdi), Saccharum officinarum. | Others. | Total VII. |
| | I | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | A.—Bomb[illegible] Proper. | | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| 1 | Ahmadabad ... | Rayatwári ... | ... | 1,129 | 437 | ... | ... | ... | 1 | 128 | ... | ... | 4 | ... | 558 | 8 | 58 | ... | 2,323 | ... | ... | ... | 2,973 | ... | 2,973 |
| | | Other Government ... | ... | 190 | ... | ... | ... | ... | ... | 13 | ... | 1 | ... | ... | ... | ... | 2 | ... | 206 | ... | ... | ... | 896 | ... | 896 |
| | | Alienated ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 76 | ... | 76 |
| | | Total ... | ... | 1,321 | 437 | ... | ... | ... | 1 | 141 | ... | 1 | 4 | ... | 558 | 8 | 60 | ... | 2,531 | ... | ... | ... | 3,945 | ... | 3,945 |
| 2 | Kaira ... | Rayatwári ... | ... | 690 | 250 | ... | ... | ... | 20 | 202 | 14 | ... | 574 | 3 | 112 | 44 | 49 | 202 | 2,160 | ... | ... | ... | 1,488 | ... | 1,488 |
| | | Other Government ... | ... | 255 | 124 | ... | ... | ... | 20 | 6 | ... | ... | 1,557 | ... | 9 | ... | 40 | 76 | 2,087 | ... | ... | ... | 1,119 | ... | 1,119 |
| | | Alienated ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 945 | 374 | ... | ... | ... | 40 | 208 | 14 | ... | 2,131 | 3 | 121 | 44 | 89 | 278 | 4,247 | ... | ... | ... | 2,607 | ... | 2,607 |
| 3 | Panch Maháls ... | Rayatwári ... | ... | 299 | 5 | ... | ... | ... | 1 | ... | 5 | 1 | 22 | ... | 21 | ... | 17 | ... | 371 | ... | ... | ... | 462 | ... | 462 |
| | | Other Government ... | ... | 303 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | 18 | ... | 330 | ... | ... | ... | 40 | ... | 40 |
| | | Alienated ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | 42 | ... | 42 |
| | | Total ... | ... | 602 | 6 | ... | ... | ... | 1 | ... | 5 | 1 | 22 | ... | 21 | 8 | 35 | ... | 701 | ... | ... | ... | 544 | ... | 544 |
| 4 | Broach ... | Rayatwári ... | ... | 236 | 31 | ... | ... | ... | 20 | ... | 1 | 38 | ... | ... | 7 | 4 | 55 | 7 | 399 | ... | ... | ... | 177 | ... | 177 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 236 | 31 | ... | ... | ... | 20 | ... | 1 | 38 | ... | ... | 7 | 4 | 55 | 7 | 399 | ... | ... | ... | 177 | ... | 177 |
| 5 | Surat ... | Rayatwári ... | ... | 603 | 187 | ... | ... | ... | 98 | ... | 7 | 22 | ... | 66 | 115 | 113 | 162 | 22 | 1,395 | ... | ... | ... | 6,966 | ... | 6,966 |
| | | Other Government ... | ... | 27 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | ... | 30 | ... | ... | ... | 112 | ... | 112 |
| | | Alienated ... | ... | 40 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 40 | ... | ... | ... | 11 | ... | 11 |
| | | Total ... | ... | 670 | 187 | ... | ... | ... | 98 | ... | 7 | 23 | ... | 66 | 115 | 113 | 164 | 22 | 1,465 | ... | ... | ... | 7,089 | ... | 7,089 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | ... | 6,928 | 5 | ... | 370 | ... | 190 | 794 | 453 | 9,097 | ... | 2,262 | 149 | 225 | 237 | ... | 20,710 | ... | ... | ... | 2,574 | ... | 2,574 |
| | | Other Government ... | ... | 14 | ... | ... | ... | ... | ... | ... | 13 | ... | ... | ... | ... | 40 | 1 | ... | 68 | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | 69 | ... | ... | 3 | ... | 41 | 40 | ... | 70 | ... | 20 | 11 | 29 | 10 | ... | 293 | ... | ... | ... | 120 | ... | 120 |
| | | Total ... | ... | 7,011 | 5 | ... | 373 | ... | 231 | 834 | 466 | 9,167 | ... | 2,282 | 160 | 294 | 248 | ... | 21,071 | ... | ... | ... | 2,694 | ... | 2,694 |
| 7 | Násik ... | Rayatwári ... | ... | 3,954 | 11 | ... | 232 | ... | 54 | 13 | ... | 5 | ... | ... | 189 | 28 | 409 | ... | 4,895 | ... | ... | ... | 9,437 | ... | 9,437 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | 413 | ... | ... | 38 | ... | ... | ... | ... | 2 | ... | 2 | 10 | 1 | 91 | ... | 557 | ... | ... | ... | 1,104 | ... | 1,104 |
| | | Total ... | ... | 4,367 | 11 | ... | 270 | ... | 54 | 13 | ... | 7 | ... | 2 | 199 | 29 | 500 | ... | 5,452 | ... | ... | ... | 10,541 | ... | 10,541 |
| 8 | Ahmadnagar ... | Rayatwári ... | ... | 5,214 | ... | ... | 380 | ... | 8 | ... | ... | 1 | ... | ... | ... | ... | 116 | ... | 5,719 | ... | ... | ... | 5,067 | ... | 5,067 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | 673 | ... | ... | 25 | 1 | ... | ... | ... | ... | ... | ... | 6 | ... | 9 | ... | 714 | ... | ... | ... | 424 | ... | 424 |
| | | Total ... | ... | 5,887 | ... | ... | 405 | 1 | 8 | ... | ... | 1 | ... | ... | 6 | ... | 125 | ... | 6,433 | ... | ... | ... | 5,491 | ... | 5,491 |
| 9 | Poona ... | Rayatwári ... | ... | 8,842 | ... | ... | 309 | 1 | 44 | 40 | 1 | 247 | ... | ... | 13 | 14 | 861 | ... | 10,390 | ... | ... | ... | 7,746 | ... | 7,746 |
| | | Other Government ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ... | 1,406 | ... | ... | 390 | ... | 16 | ... | ... | 18 | ... | ... | 4 | ... | 128 | ... | 1,962 | ... | ... | ... | 1,114 | ... | 1,114 |
| | | Total ... | ... | 10,248 | ... | ... | 699 | 19 | 60 | 40 | 1 | 265 | ... | ... | 17 | 14 | 989 | ... | 12,352 | ... | ... | ... | 8,860 | ... | 8,860 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... | ... | 7,690 | ... | ... | 312 | ... | 1,273 | ... | ... | 171 | ... | 54 | ... | ... | 110 | ... | 9,610 | ... | ... | ... | 3,599 | ... | 3,599 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 399 | ... | ... | ... | ... | 3 | ... | ... | 53 | ... | ... | ... | ... | ... | ... | 455 | ... | ... | ... | 179 | ... | 179 |
| | | Total | ... | 8,089 | ... | ... | 312 | ... | 1,276 | ... | ... | 224 | ... | 54 | ... | ... | 110 | ... | 10,065 | ... | ... | ... | 3,778 | ... | 3,778 |
| 11 | Sátára ... | Rayatwári ... | ... | 10,620 | 24 | ... | 316 | 1 | 2,684 | 153 | 1 | 384 | ... | 61 | 5 | ... | 595 | ... | 14,844 | ... | ... | ... | 12,025 | ... | 12,025 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 2,766 | 41 | ... | 61 | ... | 781 | 54 | ... | 134 | ... | 15 | 2 | ... | 100 | ... | 3,954 | ... | ... | ... | 3,377 | ... | 3,377 |
| | | Total | ... | 13,386 | 65 | ... | 377 | 1 | 3,465 | 207 | 1 | 518 | ... | 76 | 7 | ... | 695 | ... | 18,798 | ... | ... | ... | 15,402 | ... | 15,402 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | ... | 12,512 | ... | ... | 91 | ... | 222 | ... | 53 | 948 | ... | ... | 85 | 133 | 1,033 | ... | 15,077 | ... | ... | ... | 7,509 | ... | 7,509 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 2,633 | ... | ... | 87 | 8 | 53 | ... | 39 | 591 | ... | ... | ... | ... | 213 | ... | 3,624 | ... | ... | ... | 2,431 | ... | 2,431 |
| | | Total | ... | 15,145 | ... | ... | 178 | 8 | 275 | ... | 92 | 1,539 | ... | ... | 85 | 133 | 1,246 | ... | 18,701 | ... | ... | ... | 9,940 | ... | 9,940 |
| 13 | Bijápur ... | Rayatwári ... | ... | 3,109 | ... | ... | 41 | ... | 15 | 1 | ... | 8 | ... | 1 | 2 | 10 | 187 | ... | 3,374 | ... | ... | ... | 1,213 | ... | 1,213 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 348 | ... | ... | 5 | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 26 | ... | 381 | ... | ... | ... | 118 | ... | 118 |
| | | Total | ... | 3,457 | ... | ... | 46 | ... | 17 | 1 | ... | 8 | ... | 1 | 2 | 10 | 213 | ... | 3,755 | ... | ... | ... | 1,331 | ... | 1,331 |
| 14 | Dhárwár ... | Rayatwári ... | ... | 37,618 | 2 | ... | 1,127 | 516 | 37 | 9 | ... | 228 | ... | 42 | 152 | 121 | 1,197 | ... | 41,049 | ... | ... | ... | 2,928 | ... | 2,928 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 1,360 | ... | ... | 38 | 54 | 1 | 1 | ... | 7 | ... | ... | ... | 10 | 1 | ... | 1,472 | ... | ... | ... | 371 | ... | 371 |
| | | Total | ... | 38,978 | 2 | ... | 1,165 | 570 | 38 | 10 | ... | 235 | ... | 42 | 152 | 131 | 1,198 | ... | 42,521 | ... | ... | ... | 3,299 | ... | 3,299 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | ... | 423 | 255 | ... | 197 | 5 | 34 | ... | ... | 642 | ... | ... | ... | 11 | 4 | ... | 1,571 | ... | ... | ... | 1,640 | ... | 1,640 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | ... | 423 | 255 | ... | 197 | 5 | 34 | ... | ... | 642 | ... | ... | ... | 11 | 4 | ... | 1,571 | ... | ... | ... | 1,640 | ... | 1,640 |
| 16 | Kolába ... | Rayatwári ... | ... | 35 | ... | ... | 25 | 401 | ... | ... | ... | 107 | ... | ... | ... | ... | ... | ... | 568 | ... | ... | ... | 55 | ... | 55 |
| | | Other Government | ... | 5 | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 7 | ... | ... | ... | 19 | ... | 19 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | ... | 40 | ... | ... | 25 | 402 | ... | ... | ... | 108 | ... | ... | ... | ... | ... | ... | 575 | ... | ... | ... | 74 | ... | 74 |
| 17 | Ratnágiri ... | Rayatwári ... | ... | 502 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 502 | 15 | ... | 15 | 46 | ... | 46 |
| | | Other Government | ... | 2,026 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,026 | 10 | ... | 10 | 515 | ... | 515 |
| | | Alienated ... | ... | 227 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 227 | ... | ... | ... | 214 | ... | 214 |
| | | Total | ... | 2,755 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,755 | 25 | ... | 25 | 775 | ... | 775 |
| 18 | Kánara ... | Rayatwári ... | 899 | 252 | 5 | 1,092 | 283 | 8,140 | 72 | ... | ... | 5 | ... | ... | ... | ... | 4 | 260 | 11,012 | ... | ... | ... | 2,986 | ... | 2,986 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | ... | 899 | 252 | 5 | 1,092 | 283 | 8,140 | 72 | ... | ... | 5 | ... | ... | ... | ... | 4 | 260 | 11,012 | ... | ... | ... | 2,986 | ... | 2,986 |
| | Total A. | Rayatwári ... | 899 | 100,656 | 1,212 | 1,092 | 3,683 | 9,082 | 4,773 | 1,340 | 535 | 11,904 | 600 | 2,489 | 1,408 | 711 | 5,094 | 491 | 145,969 | 15 | ... | 15 | 68,891 | ... | 68,891 |
| | | Other Government | ... | 2,820 | 125 | ... | ... | 1 | 20 | 19 | 13 | 3 | 1,557 | ... | 9 | 48 | 63 | 76 | 4,754 | 10 | ... | 10 | 2,701 | ... | 2,701 |
| | | Alienated ... | ... | 10,336 | 41 | ... | 647 | 63 | 897 | 95 | 39 | 875 | ... | 37 | 33 | 40 | 578 | ... | 13,681 | ... | ... | ... | 9,581 | ... | 9,581 |
| | | Total | ... | 899 | 113,812 | 1,378 | 1,092 | 4,330 | 9,146 | 5,690 | 1,454 | 587 | 12,782 | 2,157 | 2,526 | 1,450 | 799 | 5,735 | 567 | 164,404 | 25 | ... | 25 | 81,173 | ... | 81,173 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | ... | 20 | ... | ... | ... | ... | ... | ... | ... | 20 | 36 | ... | ... | 5,379 | 2 | 68 | 5,525 | ... | ... | ... | 782 | ... | 782 |
| 20 | Hyderabad ... | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 121 | 121 | ... | 19 | 19 | 958 | ... | 958 |
| 21 | Shikárpur ... | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,932 | 1,932 | ... | 14 | 14 | 720 | 900 | 1,620 |
| 22 | Upper Sind Frontier ... | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 228 | 228 | ... | ... | ... | ... | ... | ... |
| 23 | Thar and Párkar ... | | Not | available. | | | | | | | | | | | | | | | | | | | | | |
| | | Total B. | ... | 20 | ... | ... | ... | ... | ... | ... | ... | 20 | 36 | ... | ... | 5,379 | 2 | 2,349 | 7,806 | ... | 33 | 33 | 2,460 | 900 | 3,360 |
| | | Grand Total | ... | 899 | 113,832 | 1,378 | 1,092 | 4,330 | 9,146 | 5,690 | 1,454 | 587 | 12,802 | 2,193 | 2,526 | 1,450 | 6,178 | 5,737 | 2,916 | 172,210 | 25 | 33 | 58 | 83,633 | 900 | 84,533 |

# III.—Crops, 1887-88—*continued.*

| No. | District. | | VIII.—Oil Seeds. Sesamum (Til), Sesamum indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Erandya), Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Niger-seed (Khurásni), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobare), Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli), Indigofera tinctoria. | Safflower (Kusumba), Carthamus persicus. | Morinda (A'l, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tág), Crotolaria juncea. | Hemp (Ambádi, Sheria), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | | Acres. | Acres. | Acres. |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad. | Rayatwári... | 18,571 | 2,606 | 4,393 | 139 | 567 | ... | ... | ... | ... | 26,276 | 381 | 120 | ... | ... | 501 | 152,213 | 887 | 30 | ... | ... | ... | 153,130 | 281 | 702,459 | 20,532 | 681,927 |
| | | Other Govt. | 14,288 | 423 | 2,187 | 5 | 639 | ... | ... | ... | ... | 17,542 | ... | 1 | ... | ... | 1 | 219,556 | 767 | 71 | ... | ... | ... | 220,394 | 73 | 638,186 | 2,821 | 635,365 |
| | | Alienated ... | 1,009 | ... | 171 | ... | ... | ... | ... | ... | ... | 1,180 | ... | ... | ... | ... | ... | 53,340 | ... | 1 | ... | ... | ... | 53,341 | ... | 81,217 | 184 | 81,033 |
| | | Total ... | 33,868 | 3,029 | 6,751 | 144 | 1,206 | ... | ... | ... | ... | 44,998 | 381 | 121 | ... | ... | 502 | 425,109 | 1,654 | 102 | ... | ... | ... | 426,865 | 354 | 1,421,862 | 23,537 | 1,398,325 |
| 2 | Kairá ... | Rayatwári... | 3,980 | 212 | 3,305 | 953 | 42 | ... | ... | ... | ... | 8,492 | 194 | 1,057 | ... | ... | 1,251 | 5,838 | 43 | 959 | ... | ... | ... | 6,840 | 24 | 582,311 | 34,712 | 547,599 |
| | | Other Govt. | 1,428 | 3 | 555 | 15 | 1 | ... | ... | ... | ... | 2,002 | 135 | 140 | ... | ... | 275 | 3,707 | 10 | 573 | ... | ... | ... | 4,290 | 8 | 159,528 | 6,444 | 153,084 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total ... | 5,408 | 215 | 3,860 | 968 | 43 | ... | ... | ... | ... | 10,494 | 329 | 1,197 | ... | ... | 1,526 | 9,545 | 53 | 1,532 | ... | ... | ... | 11,130 | 32 | 741,839 | 41,156 | 700,683 |
| 3 | Panch Maháls. | Rayatwári... | 18,287 | 83 | 1,285 | ... | 420 | 8,202 | ... | ... | ... | 28,277 | ... | ... | ... | ... | ... | 116 | 987 | 261 | ... | ... | ... | 1,364 | ... | 288,751 | 56,000 | 232,751 |
| | | Other Govt. | 574 | ... | 319 | ... | 21 | ... | ... | ... | ... | 914 | ... | ... | ... | ... | ... | 239 | 117 | 61 | ... | ... | ... | 417 | ... | 27,623 | 2,720 | 24,903 |
| | | Alienated ... | 110 | ... | 87 | ... | ... | ... | ... | ... | ... | 197 | ... | ... | ... | ... | ... | ..... | ... | 32 | ... | ... | ... | 32 | ... | 15,234 | 142 | 15,092 |
| | | Total ... | 18,971 | 83 | 1,691 | ... | 441 | 8,202 | ... | ... | ... | 29,388 | ... | ... | ... | ... | ... | 355 | 1,104 | 354 | ... | ... | ... | 1,813 | ... | 331,608 | 58,862 | 272,746 |
| 4 | Broach ... | Rayatwári... | 12,576 | ... | 1,976 | ... | ... | ... | ... | ... | ... | 14,552 | 668 | 24 | ... | ... | 692 | 246,268 | 32 | 1 | ... | ... | ... | 246,301 | 65 | 556,482 | 699 | 555,783 |
| | | Other Govt. | 25 | ... | ... | ... | ... | ... | ... | ... | ... | 25 | ... | ... | ... | ... | ... | 400 | ... | ... | ... | ... | ... | 400 | ... | 982 | ..... | 982 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total ... | 12,601 | ... | 1,976 | ... | ... | ... | ... | ... | ... | 14,577 | 668 | 24 | ... | ... | 692 | 246,668 | 32 | 1 | ... | ... | ... | 246,701 | 65 | 557,464 | 699 | 556,765 |
| 5 | Surat ... | Rayatwári... | 2,580 | ... | 32,986 | ... | 8 | 87 | 73 | ... | ... | 35,734 | ... | 62 | 34 | ... | 96 | 96,082 | 2,866 | 83 | ... | ... | ... | 99,031 | 120 | 522,049 | 64,438 | 457,611 |
| | | Other Govt. | 14 | ... | 294 | ... | ... | ... | 7 | ... | ... | 315 | ... | ... | ... | ... | ... | 1,377 | 18 | ... | ... | ... | ... | 1,395 | ... | 5,598 | 409 | 5,189 |
| | | Alienated ... | 16 | ... | 66 | ... | ... | ... | 4 | ... | ... | 86 | ... | ... | ... | ... | ... | 61 | 6 | ... | ... | ... | ... | 67 | ... | 3,801 | 53 | 3,748 |
| | | Total ... | 2,610 | ... | 33,346 | ... | 8 | 87 | 84 | ... | ... | 36,135 | ... | 62 | 34 | ... | 96 | 97,520 | 2,890 | 83 | ... | ... | ... | 100,493 | 120 | 531,448 | 64,900 | 466,548 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. | Rayatwári... | 69,462 | 94,667 | 4,302 | 2,933 | ... | 7,232 | 4,570 | ... | ... | 183,166 | 2,569 | 25 | 2,513 | ... | 5,107 | 891,057 | 1,092 | 2,937 | ... | ... | 2 | 895,088 | 27 | 2,729,677 | 11,559 | 2,718,118 |
| | | Other Govt. | 1,846 | 1,514 | 98 | ... | ... | 1,738 | ... | ... | ... | 5,199 | ... | ... | ... | ... | ... | 3,068 | 265 | 12 | ... | ... | ... | 3,345 | ... | 66,898 | 10 | 66,888 |
| | | Alienated ... | 1,628 | 1,084 | 35 | 32 | ... | 157 | 34 | ... | ... | 2,970 | ... | ... | ... | ... | ... | 24,666 | 114 | 131 | ... | ... | ... | 24,911 | ... | 66,342 | 236 | 66,106 |
| | | Total ... | 72,936 | 97,265 | 4,435 | 2,965 | ... | 9,127 | 4,604 | ... | 3 | 191,335 | 2,569 | 25 | 2,513 | ... | 5,107 | 918,791 | 1,471 | 3,080 | ... | ... | 2 | 923,344 | 27 | 2,862,917 | 11,805 | 2,851,112 |
| 7 | Násik ... | Rayatwári... | 43,202 | 70,533 | 4,412 | 8,121 | ... | 116,596 | 15,261 | ... | ... | 258,125 | ... | ... | ... | ... | ... | 22,932 | 2,722 | 223 | ... | ... | ... | 25,877 | ... | 1,863,878 | 32,602 | 1,831,276 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 982 | 3,073 | 48 | 556 | ... | 4,119 | 1,221 | ... | ... | 9,999 | ... | ... | ... | ... | ... | 107 | 221 | ... | ... | ... | ... | 328 | ... | 104,481 | 989 | 103,492 |
| | | Total ... | 44,184 | 73,606 | 4,460 | 8,677 | ... | 120,715 | 16,482 | ... | ... | 268,124 | ... | ... | ... | ... | ... | 23,039 | 2,943 | 223 | ... | ... | ... | 26,205 | ... | 1,968,359 | 33,591 | 1,934,768 |
| 8 | Ahmadnagar. | Rayatwári... | 15,243 | 10,846 | 385 | 74,286 | ... | 27,855 | 4,632 | ... | ... | 133,247 | 158 | ... | ... | ... | 158 | 24,842 | 296 | 7,727 | ... | ... | ... | 32,865 | 60 | 2,324,813 | 33,524 | 2,291,289 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 2,974 | 1,555 | 26 | 11,372 | ... | 448 | 356 | ... | ... | 16,731 | ... | ... | ... | ... | ... | 6,058 | 25 | 936 | ... | ... | ... | 7,019 | 1 | 311,192 | 1,852 | 309,340 |
| | | Total ... | 18,217 | 12,401 | 411 | 85,658 | ... | 28,303 | 4,988 | ... | ... | 149,978 | 158 | ... | ... | ... | 158 | 30,900 | 321 | 8,663 | ... | ... | ... | 39,884 | 61 | 2,636,005 | 35,376 | 2,600,629 |
| 9 | Poona ... | Rayatwári... | 26,553 | 856 | 128 | 78,975 | ... | 11,618 | 7,989 | ... | ... | 126,119 | ... | ... | ... | ... | ... | 1,073 | 466 | 3,621 | ... | ... | 3 | 5,163 | ... | 1,817,838 | 54,170 | 1,763,668 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 3,595 | 63 | 3 | 9,367 | ... | 3,815 | 1,668 | ... | ... | 18,511 | ... | ... | ... | ... | ... | 77 | 112 | 240 | ... | ... | ... | 429 | ... | 325,768 | 11,727 | 314,041 |
| | | Total ... | 30,148 | 919 | 131 | 88,342 | ... | 15,433 | 9,657 | ... | ... | 144,630 | ... | ... | ... | ... | ... | 1,150 | 578 | 3,861 | ... | ... | 3 | 5,592 | ... | 2,143,606 | 65,897 | 2,077,709 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 7,451 | 39,074 | 8,417 | 129,168 | ... | 23,246 | 31,286 | ... | ... | 238,642 | 13 | ... | 306 | ... | 319 | 8,034 | 159 | 18,700 | ... | ... | ... | 26,893 | 55 | 1,968,379 | 25,440 | 1,942,939 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 852 | 1,478 | 537 | 7,533 | ... | 1,282 | 2,241 | ... | ... | 13,923 | ... | ... | ... | ... | ... | 211 | ... | 714 | ... | ... | ... | 925 | ... | 145,090 | 1,907 | 143,183 |
| | | Total | 8,303 | 40,552 | 8,954 | 136,701 | ... | 24,528 | 33,527 | ... | ... | 252,565 | 13 | ... | 306 | ... | 319 | 8,245 | 159 | 19,414 | ... | ... | ... | 27,818 | 55 | 2,113,469 | 27,347 | 2,086,122 |
| 11 | Sátára | Rayatwári | 164 | 2,066 | 639 | 23,554 | ... | 15,229 | 38,958 | ... | ... | 80,610 | ... | ... | ... | ... | ... | 11,974 | 4,272 | 7,462 | ... | ... | ... | 23,708 | 48 | 1,557,634 | 89,754 | 1,467,880 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 7 | 384 | 195 | 4,206 | 3 | 3,675 | 12,043 | ... | ... | 20,513 | ... | ... | ... | ... | ... | 719 | 928 | 1,335 | ... | ... | ... | 2,982 | 2 | 327,403 | 24,365 | 303,038 |
| | | Total | 171 | 2,150 | 834 | 27,760 | 3 | 18,904 | 51,001 | ... | ... | 101,123 | ... | ... | ... | ... | ... | 12,693 | 5,200 | 8,797 | ... | ... | ... | 26,690 | 50 | 1,885,037 | 114,119 | 1,770,918 |
| | *III—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 6,250 | 2,860 | 10,935 | 28,837 | ... | 1,379 | 8,076 | ... | ... | 58,337 | ... | 3 | ... | ... | 3 | 156,615 | 2,752 | 3,874 | ... | ... | ... | 163,241 | 13 | 14,34,801 | 29,971 | 1,404,830 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 936 | 172 | 3,160 | 8,855 | ... | 514 | 1,692 | ... | ... | 15,329 | ... | ... | ... | ... | ... | 29,918 | 1,006 | 577 | ... | ... | ... | 31,501 | 13 | 327,936 | 4,278 | 323,658 |
| | | Total | 7,186 | 3,032 | 13,095 | 37,692 | ... | 1,893 | 9,768 | ... | ... | 73,666 | ... | 3 | ... | ... | 3 | 186,533 | 3,758 | 4,451 | ... | ... | ... | 194,742 | 26 | 1,762,737 | 34,249 | 1,728,488 |
| 13 | Bijápur | Rayatwári | 19,260 | 49,635 | 7,068 | 67,309 | ... | 30,898 | 71 | ... | ... | 174,241 | ... | ... | ... | ... | ... | 329,386 | 161 | 11,837 | ... | ... | ... | 341,384 | 20 | 23,68,319 | 3,343 | 2,364,976 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 1,713 | 5,221 | 997 | 7,452 | ... | 2,515 | 7 | ... | ... | 17,905 | ... | ... | ... | ... | ... | 46,239 | 33 | 1,173 | ... | ... | ... | 47,445 | 2 | 276,171 | 210 | 275,961 |
| | | Total | 20,973 | 54,856 | 8,065 | 74,761 | ... | 33,413 | 78 | ... | ... | 192,146 | ... | ... | ... | ... | ... | 375,625 | 194 | 13,010 | ... | ... | ... | 388,829 | 22 | 2,644,490 | 3,553 | 2,640,937 |
| 14 | Dhárwár | Rayatwári | 4,463 | 20,180 | 17,107 | 38,633 | ... | 3,748 | 1 | ... | ... | 84,132 | ... | ... | ... | ... | ... | 463,752 | 348 | 5,557 | ... | ... | ... | 469,657 | 11 | 1,972,027 | 28,956 | 1,943,071 |
| | | Other Govt. | ... | ... | 7 | ... | ... | 3 | ... | ... | ... | 10 | ... | ... | ... | ... | ... | 43 | 2 | ... | ... | ... | ... | 45 | ... | 358 | ... | 358 |
| | | Alienated | 98 | 1,194 | 828 | 1,348 | ... | 332 | ... | ... | ... | 3,800 | ... | ... | ... | ... | ... | 16,145 | 4 | 362 | ... | ... | ... | 16,511 | 1 | 109,902 | 1,654 | 108,248 |
| | | Total | 4,561 | 21,374 | 17,942 | 39,981 | ... | 4,083 | 1 | ... | ... | 87,942 | ... | ... | ... | ... | ... | 479,940 | 354 | 5,919 | ... | ... | ... | 486,213 | 12 | 2,082,287 | 30,610 | 2,051,677 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 5,333 | ... | 2,459 | ... | 24 | 12,572 | ... | ... | 44 | 20,432 | ... | ... | ... | ... | ... | ..... | 3,257 | 1,976 | ... | ... | ... | 5,233 | ... | 519,430 | 6,433 | 512,997 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 1,072 | 7 | 1,065 |
| | | Alienated | 2 | ... | ... | ... | ... | 94 | ... | ... | ... | 96 | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 8,330 | 50 | 8,280 |
| | | Total | 5,335 | ... | 2,459 | ... | 24 | 12,666 | ... | ... | 44 | 20,528 | ... | ... | ... | ... | ... | ... | 3,257 | 1,976 | ... | ... | ... | 5,233 | ... | 528,832 | 6,490 | 522,342 |
| 16 | Kolába | Rayatwári | 1,079 | ... | 23 | ... | ... | 29 | ... | ... | 120 | 1,251 | ... | ... | ... | ... | ... | ..... | 154 | 9 | ... | ... | ... | 163 | 1 | 179,023 | 4,831 | 174,192 |
| | | Other Govt. | 6,032 | ... | 5 | ... | ... | 55 | ... | ... | ... | 6,092 | ... | ... | ... | ... | ... | ..... | 122 | 3 | ... | ... | ... | 125 | ... | 192,682 | 4,622 | 188,060 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 1,154 | 6 | 1,148 |
| | | Total | 7,111 | ... | 28 | ... | ... | 84 | ... | ... | 120 | 7,343 | ... | ... | ... | ... | ... | ... | 276 | 12 | ... | ... | ... | 288 | 1 | 372,859 | 9,459 | 363,400 |
| 17 | Ratnágiri | Rayatwári | 2,092 | ... | ... | ... | ... | ... | ... | ... | ... | 2,092 | ... | ... | ... | ... | ... | ..... | 137 | ... | ... | ... | ... | 137 | 106 | 39,512 | 1,252 | 38,260 |
| | | Other Govt. | 12,336 | ... | ... | ... | ... | ... | ... | ... | ... | 12,336 | ... | ... | ... | ... | ... | ..... | 1,734 | ... | ... | ... | ... | 1,734 | ... | 428,667 | 22,944 | 405,723 |
| | | Alienated | 432 | ... | ... | ... | ... | ... | ... | ... | ... | 432 | ... | ... | ... | ... | ... | ..... | 321 | ... | ... | ... | ... | 321 | ... | 14,701 | 620 | 14,081 |
| | | Total | 14,860 | ... | ... | ... | ... | ... | ... | ... | ... | 14,860 | ... | ... | ... | ... | ... | ... | 2,192 | ... | ... | ... | ... | 2,192 | 106 | 482,880 | 24,816 | 458,064 |
| 18 | Kánara | Rayatwári | 121 | 4 | 394 | ... | ... | 165 | ... | ... | 324 | 1,008 | ... | ... | ... | ... | ... | ..... | 55 | 110 | ... | ... | ... | 165 | 21 | 234,534 | 12,488 | 222,046 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total | 121 | 4 | 394 | ... | ... | 165 | ... | ... | 324 | 1,008 | ... | ... | ... | ... | ... | ... | 55 | 110 | ... | ... | ... | 165 | 21 | 234,534 | 12,488 | 222,046 |
| | Total A. | Rayatwári | 256,667 | 293,622 | 100,214 | 452,908 | 1,061 | 253,856 | 110,917 | ... | 488 | 1,474,733 | 3,983 | 1,291 | 2,853 | ... | 8,127 | 2,410,182 | 20,686 | 65,367 | ... | ... | 5 | 2,496,240 | 852 | 21,661,917 | 510,704 | 21,151,213 |
| | | Other Govt. | 36,543 | 1,940 | 3,465 | 20 | 661 | 1,796 | 7 | ... | 3 | 44,435 | 135 | 141 | ... | ... | 276 | 228,390 | 3,035 | 720 | ... | ... | ... | 232,145 | 81 | 1,521,594 | 39,977 | 1,481,617 |
| | | Alienated | 14,354 | 14,224 | 6,153 | 50,721 | 3 | 16,951 | 19,266 | ... | ... | 121,672 | ... | ... | ... | ... | ... | 177,541 | 2,770 | 5,501 | ... | ... | ... | 185,812 | 19 | 2,118,722 | 48,273 | 2,070,449 |
| | | Total | 307,564 | 309,786 | 109,832 | 503,649 | 1,725 | 277,603 | 130,190 | ... | 491 | 1,640,840 | 4,118 | 1,432 | 2,853 | ... | 8,403 | 2,816,113 | 26,491 | 71,588 | ... | ... | 5 | 2,914,197 | 952 | 25,302,233 | 598,954 | 24,703,279 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 5,125 | ... | ... | ... | 4,893 | ... | ... | ... | 6,246 | 16,264 | 42 | 2 | ... | ... | 44 | 748 | ... | ... | 106 | ... | ... | 854 | ... | 284,830 | 21,303 | 263,527 |
| 20 | Hyderabad | | 41,173 | ... | ... | ... | ... | ... | ... | ... | 16,640 | 57,813 | ... | ... | ... | 5,670 | 5,670 | 45,511 | ... | ... | ... | ... | 405 | 45,916 | ... | 643,670 | 6,691 | 636,979 |
| 21 | Shikárpur | | 17,598 | ... | ... | ... | ... | ... | ... | ... | 40,196 | 57,794 | ... | ... | ... | 1,725 | 1,725 | 7,142 | ... | ... | ... | ... | 98 | 7,240 | ... | 685,695 | 69,778 | 615,917 |
| 22 | Upper Sind Frontier | | 39,054 | ... | ... | ... | ... | ... | ... | ... | 2,231 | 41,285 | ... | ... | ... | 132 | 132 | 476 | ... | ... | ... | ... | 8 | 484 | ... | 139,084 | 5,921 | 133,163 |
| 23 | Thar and Párkar | | Not available. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total B. | | 102,950 | ... | ... | ... | 4,893 | ... | ... | ... | 65,313 | 173,156 | 42 | 2 | ... | 7,527 | 7,571 | 53,877 | ... | ... | 106 | ... | 511 | 54,494 | ... | 1,753,279 | 103,693 | 1,649,586 |
| | Grand Total | | 410,514 | 309,786 | 109,832 | 503,649 | 6,618 | 277,603 | 130,190 | ... | 65,804 | 1,813,996 | 4,160 | 1,434 | 2,853 | 7,527 | 15,974 | 2,869,990 | 26,491 | 71,588 | 106 | ... | 516 | 2,968,691 | 952 | 27,055,512 | 702,647 | 26,352,865 |

# IV.—Irrigation, 1887-88.

| No. | District. | | Net Area cropped. | Area irrigated from canals. | Area irrigated from other sources. | Total Area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct Area cropped with irrigation more than once. | Balance net irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | Acres. | Acres. | Acres. | Acres. | | | | | | | | Acres. | Acres. | Acres. |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. .. | 681,927 | 4,348 | 51,943 | 56,291 | 14,017 | 19,464 | 15,646 | 2,939 | 3,539 | 2,345 | 133 | 58,083 | 1,792 | 56,291 |
| | | Other Government .. .. | 635,365 | 120 | 11,034 | 11,154 | 3,685 | 2,641 | 2,821 | 841 | 1,108 | 23 | 35 | 11,154 | ..... | 11,154 |
| | | Alienated .. .. .. | 81,038 | 270 | 838 | 1,108 | 448 | 310 | 271 | 76 | 3 | ..... | ..... | 1,108 | ..... | 1,108 |
| | | Total ... | 1,398,325 | 4,738 | 63,815 | 68,553 | 18,150 | 22,415 | 18,738 | 3,856 | 4,650 | 2,368 | 168 | 70,345 | 1,792 | 68,553 |
| 2 | Kaira ... ... | Rayatwári .. .. .. | 547,599 | 10,825 | 24,809 | 35,634 | 7,246 | 11,834 | 8,702 | 1,488 | 2,134 | 5,968 | 587 | 37,959 | 2,325 | 35,634 |
| | | Other Government .. .. | 153,084 | ..... | 15,407 | 15,407 | 1,439 | 286 | 2,296 | 1,119 | 1,860 | 8,810 | 521 | 16,331 | 924 | 15,407 |
| | | Alienated .. .. .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 700,683 | 10,825 | 40,216 | 51,041 | 8,685 | 12,120 | 10,998 | 2,607 | 3,994 | 14,778 | 1,108 | 54,290 | 3,249 | 51,041 |
| 3 | Panch Maháls. | Rayatwári .. .. .. | 232,751 | 311 | 1,315 | 1,626 | 484 | 131 | 95 | 462 | 246 | 214 | 3 | 1,635 | 9 | 1,626 |
| | | Other Government .. .. | 24,903 | ..... | 812 | 812 | 597 | ..... | ..... | 40 | 83 | 185 | ..... | 905 | 93 | 812 |
| | | Alienated .. .. .. | 15,092 | ..... | 44 | 44 | ..... | ..... | 2 | 42 | ..... | ..... | ..... | 44 | ..... | 44 |
| | | Total ... | 272,746 | 311 | 2,171 | 2,482 | 1,081 | 131 | 97 | 544 | 329 | 399 | 3 | 2,584 | 102 | 2,482 |
| 4 | Broach ... | Rayatwári .. .. .. | 555,783 | ..... | 1,266 | 1,266 | 13 | 30 | 10 | 146 | 677 | 404 | 6 | 1,286 | 20 | 1,266 |
| | | Other Government .. .. | 982 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. .. .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 556,765 | ... | 1,266 | 1,266 | 13 | 30 | 10 | 146 | 677 | 404 | 6 | 1,286 | 20 | 1,266 |
| 5 | Surát ... ... | Rayatwári .. .. .. | 457,611 | ..... | 12,663 | 12,663 | 21 | 3,523 | 64 | 6,965 | 1,726 | 445 | ..... | 12,744 | 81 | 12,663 |
| | | Other Government .. .. | 5,189 | ..... | 127 | 127 | ..... | ..... | ..... | 113 | 13 | 1 | ..... | 127 | ..... | 127 |
| | | Alienated .. .. .. | 3,748 | ..... | 12 | 12 | ..... | ..... | ..... | 11 | 1 | ..... | ..... | 12 | ..... | 12 |
| | | Total ... | 466,548 | ... | 12,802 | 12,802 | 21 | 3,523 | 64 | 7,089 | 1,740 | 446 | ... | 12,883 | 81 | 12,802 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. .. | 2,718,118 | 11,524 | 24,126 | 35,650 | 11,994 | 2,098 | 2,625 | 2,574 | 8,169 | 9,117 | 19 | 36,596 | 946 | 35,650 |
| | | Other Government .. .. | 66,888 | ..... | 19 | 19 | ..... | ..... | 2 | ..... | 13 | 4 | ..... | 19 | ..... | 19 |
| | | Alienated .. .. .. | 66,106 | 375 | 814 | 1,189 | 209 | 52 | 24 | 120 | 702 | 201 | ..... | 1,308 | 119 | 1,189 |
| | | Total ... | 2,851,112 | 11,889 | 24,959 | 36,858 | 12,203 | 2,150 | 2,651 | 2,694 | 8,884 | 9,322 | 19 | 37,923 | 1,065 | 36,858 |
| 7 | Násik... ... | Rayatwári .. .. .. | 1,831,276 | 28,165 | 39,978 | 68,143 | 25,446 | 4,042 | 11,402 | 9,226 | 9,485 | 15,353 | 136 | 75,090 | 6,947 | 68,143 |
| | | Other Government .. .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. .. .. | 103,492 | 2,686 | 3,548 | 6,234 | 1,790 | 319 | 655 | 1,102 | 1,308 | 1,499 | 13 | 6,686 | 452 | 6,234 |
| | | Total ... | 1,934,768 | 30,851 | 43,526 | 74,377 | 27,236 | 4,361 | 12,057 | 10,328 | 10,793 | 16,852 | 149 | 81,776 | 7,399 | 74,377 |
| 8 | Ahmadnagar... | Rayatwári .. .. .. | 2,291,289 | 2,527 | 62,127 | 64,654 | 26,945 | 1,186 | 24,999 | 4,482 | 13,529 | 7,983 | 377 | 79,501 | 14,847 | 64,654 |
| | | Other Government .. .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. .. .. | 309,340 | 40 | 8,129 | 8,169 | 3,263 | 164 | 3,270 | 424 | 1,412 | 870 | 24 | 9,427 | 1,258 | 8,169 |
| | | Total ... | 2,600,629 | 2,567 | 70,256 | 72,823 | 30,208 | 1,350 | 28,269 | 4,906 | 14,941 | 8,853 | 401 | 88,928 | 16,105 | 72,823 |
| 9 | Poona... ... | Rayatwári .. .. .. | 1,763,668 | 13,886 | 66,995 | 80,881 | 22,317 | 1,570 | 35,483 | 7,392 | 25,189 | 4,874 | 940 | 97,765 | 16,884 | 80,831 |
| | | Other Government .. .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. .. .. | 314,041 | 1,714 | 11,565 | 13,279 | 3,581 | 280 | 5,455 | 1,093 | 4,353 | 432 | 165 | 15,359 | 2,080 | 13,279 |
| | | Total ... | 2,077,709 | 15,600 | 78,560 | 94,160 | 25,898 | 1,850 | 40,938 | 8,485 | 29,542 | 5,306 | 1,105 | 113,124 | 18,964 | 94,160 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 1,942,939 | 5,929 | 71,326 | 77,755 | 33,723 | 4,948 | 30,417 | 3,599 | 5,072 | 21,970 | 444 | 100,173 | 22,418 | 77,755 |
| | | Other Government | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 143,183 | 57 | 4,039 | 4,096 | 2,070 | 278 | 2,023 | 179 | 558 | 962 | 44 | 6,114 | 2,018 | 4,096 |
| | | Total | 2,086,122 | 5,986 | 75,865 | 81,851 | 35,793 | 5,226 | 32,440 | 3,778 | 5,630 | 22,932 | 488 | 106,287 | 24,436 | 81,851 |
| 11 | Sátára | Rayatwári | 1,467,880 | 4,557 | 73,156 | 77,713 | 19,227 | 4,111 | 20,037 | 11,885 | 11,637 | 24,522 | 294 | 91,713 | 14,000 | 77,713 |
| | | Other Government | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 303,038 | 535 | 20,553 | 21,088 | 5,309 | 2,050 | 3,408 | 3,227 | 3,487 | 6,141 | 43 | 23,665 | 2,577 | 21,088 |
| | | Total | 1,770,918 | 5,092 | 93,709 | 98,801 | 24,536 | 6,161 | 23,445 | 15,112 | 15,124 | 30,663 | 337 | 115,378 | 16,577 | 98,801 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 1,404,830 | 2,697 | 28,617 | 31,314 | 1,794 | 8,875 | 5,120 | 7,267 | 10,799 | 846 | 21 | 34,722 | 3,408 | 31,314 |
| | | Other Government | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 323,658 | 1,002 | 7,269 | 8,271 | 856 | 392 | 1,691 | 2,350 | 2,719 | 707 | 1 | 8,716 | 445 | 8,271 |
| | | Total | 1,728,488 | 3,699 | 35,886 | 39,585 | 2,650 | 9,267 | 6,811 | 9,617 | 13,518 | 1,553 | 22 | 43,438 | 3,853 | 39,585 |
| 13. | Bijápur | Rayatwári | 2,364,976 | 131 | 9,319 | 9,450 | 1,841 | 1,151 | 751 | 1,213 | 3,661 | 1,428 | 76 | 10,121 | 671 | 9,450 |
| | | Other Government | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 275,961 | 3 | 1,307 | 1,310 | 313 | 92 | 142 | 118 | 520 | 215 | 7 | 1,407 | 97. | 1,310 |
| | | Total | 2,640,937 | 134 | 10,626 | 10,760 | 2,154 | 1,243 | 893 | 1,331 | 4,181 | 1,643 | 83 | 11,528 | 768 | 10,760 |
| 14 | Dhárwár | Rayatwári | 1,943,071 | 6,658 | 60,832 | 67,490 | 102 | 59,366 | 496 | 2,551 | 4,609 | 1,067 | 2 | 68,193 | 703 | 67,490 |
| | | Other Government | 358 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 108,248 | 529 | 6,635 | 7,164 | .... | 6,421 | 7 | 338 | 382 | 24 | .... | 7,172 | 8 | 7,164 |
| | | Total | 2,051,677 | 7,187 | 67,467 | 74,654 | 102 | 65,787 | 503 | 2,889 | 4,991 | 1,091 | 2 | 75,365 | 711 | 74,654 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 512,997 | .... | 5,552 | 5,552 | .... | .... | .... | 1,595 | 3,743 | 198 | 16 | 5,552 | .... | 5,552 |
| | | Other Government | 1,065 | .... | 8 | 8 | .... | .... | .... | .... | 8 | .... | .... | 8 | .... | 8 |
| | | Alienated | 8,280 | .... | 50 | 50 | .... | .... | .... | .... | 50 | .... | .... | 50 | .... | 50 |
| | | Total | 522,342 | ... | 5,610 | 5,610 | ... | ... | ... | 1,595 | 3,801 | 198 | 16 | 5,610 | ... | 5,610 |
| 16 | Kolába | Rayatwári | 174,192 | .... | 2,405 | 2,405 | .... | .... | .... | 46 | 1,933 | 426 | .... | 2,405 | .... | 2,405 |
| | | Other Government | 188,060 | .... | 21 | 21 | .... | .... | .... | 8 | 13 | .... | .... | 21 | .... | 21 |
| | | Alienated | 1,148 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total | 363,400 | ... | 2,426 | 2,426 | ... | ... | ... | 54 | 1,946 | 426 | ... | 2,426 | ... | 2,426 |
| 17 | Ratnágiri | Rayatwári | 33,260 | 362 | 453 | 815 | .... | 467 | 212 | 22 | 54 | 60 | .... | 815 | .... | 815 |
| | | Other Government | 405,723 | 3,031 | 3,320 | 6,351 | .... | 3,464 | 1,065 | 516 | 1,099 | 207 | .... | 6,351 | .... | 6,351 |
| | | Alienated | 14,081 | 70 | 138 | 208 | .... | 74 | 48 | 26 | 55 | 5 | .... | 208 | .... | 208 |
| | | Total | 458,064 | 3,463 | 3,911 | 7,374 | ... | 4,005 | 1,325 | 564 | 1,208 | 272 | ... | 7,374 | ... | 7,374 |
| 18 | Kánara | Rayatwári | 222,046 | 5,449 | 35,663 | 41,112 | .... | 27,087 | 592 | 2,422 | 9,266 | 2,870 | .... | 42,237 | 1,125 | 41,112 |
| | | Other Government | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total | 222,046 | 5,449 | 35,663 | 41,112 | ... | 27,087 | 592 | 2,422 | 9,266 | 2,870 | ... | 42,237 | 1,125 | 41,112 |
| | Total A. | Rayatwári | 21,151,213 | 97,369 | 573,045 | 670,414 | 165,170 | 149,883 | 156,651 | 66,274 | 115,468 | 100,090 | 3,054 | 756,590 | 86,176 | 670,414 |
| | | Other Government | 1,481,617 | 3,151 | 30,748 | 33,899 | 5,721 | 6,391 | 6,184 | 2,637 | 4,197 | 9,230 | 556 | 34,916 | 1,017 | 33,899 |
| | | Alienated | 2,070,449 | 7,281 | 64,941 | 72,222 | 17,839 | 10,432 | 16,996 | 9,106 | 15,550 | 11,056 | 297 | 81,276 | 9,054 | 72,222 |
| | | Total | 24,703,279 | 107,801 | 668,734 | 776,535 | 188,730 | 166,706 | 179,831 | 78,017 | 135,215 | 120,376 | 3,907 | 872,782 | 96,247 | 776,535 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 263,527 | 206,005 | 50,344 | 256,349 | 29,777 | 133,543 | 85,816 | 780 | 4,697 | 21,319 | ... | 275,932 | 19,583 | 256,349 |
| 20 | Hyderabad | | 636,979 | 593,791 | 42,081 | 635,872 | 30,837 | 151,086 | 323,407 | 958 | 21,696 | 114,423 | ... | 642,407 | 6,535 | 635,872 |
| 21 | Shikárpur | | 615,917 | 509,797 | 106,120 | 615,917 | 127,230 | 154,781 | 317,252 | 720 | 17,008 | 68,704 | ... | 685,695 | 69,778 | 615,917 |
| 22 | Upper Sind Frontier | | 133,163 | 127,311 | 5,852 | 133,163 | 12,176 | 9,784 | 73,882 | ... | 1,060 | 42,182 | ... | 139,084 | 5,921 | 133,163 |
| 23 | Thar and Párkar | | | Not available. | | | | | | | | | | | | |
| | | Total B. | 1,649,586 | 1,436,904 | 204,397 | 1,641,301 | 200,020 | 449,194 | 800,357 | 2,458 | 44,461 | 246,628 | ... | 1,743,118 | 101,817 | 1,641,301 |
| | | Grand Total | 26,352,865 | 1,544,705 | 873,131 | 2,417,836 | 388,750 | 615,900 | 980,188 | 80,475 | 179,676 | 367,004 | 3,907 | 2,615,900 | 198,064 | 2,417,836 |

# V.—Agricultural Stock, 1887-88.

| No. | District. | | Cattle and other Quadrupeds. | | | | | | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Plough Cattle. | | Bulls for breeding purposes only. | | Oxen and He-buffaloes for other purposes. | | Milch Cattle. | | Young Stock. | | Total Cattle. | Horses and Ponies. | Sheep. | Goats. | Small. | Large, *i. e.* over two Bullocks. | For riding. | For carrying loads. |
| | | | Oxen. | He-Buffaloes. | Bulls. | Bull Buffaloes. | Oxen. | He-Buffaloes. | Cows. | She-Buffaloes. | Calves. | Buffaloe Calves. | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. | 85,586 | 45 | 760 | 314 | 3,319 | 768 | 48,898 | 61,143 | 26,850 | 26,257 | 253,940 | 3,029 | 24,388 | 13,534 | 38,477 | 35 | 815 | 13,158 |
| | | Other Government | 52,526 | 38 | 342 | 171 | 911 | 222 | 36,341 | 28,820 | 15,487 | 10,612 | 145,470 | 2,628 | 22,013 | 18,174 | 24,400 | 442 | 205 | 8,673 |
| | | Alienated .. .. | 6,084 | 3 | 18 | 28 | 48 | 24 | 2,832 | 2,845 | 852 | 891 | 13,625 | 238 | 1,659 | 1,440 | 2,534 | 74 | 51 | 1,007 |
| | | Total ... | 144,196 | 86 | 1,120 | 513 | 4,278 | 1,014 | 88,071 | 92,808 | 43,189 | 37,760 | 413,035 | 5,895 | 48,060 | 33,148 | 65,411 | 551 | 1,071 | 22,838 |
| 2 | Kaira ... ... | Rayatwári .. .. | 97,113 | 4 | 259 | 294 | 845 | 100 | 36,950 | 71,062 | 31,351 | 42,782 | 280,760 | 1,679 | 26,866 | 4,281 | 49,873 | ... | 676 | 19,154 |
| | | Other Government | 23,530 | 4 | 47 | 123 | 203 | 16 | 2,235 | 32,841 | 2,993 | 17,950 | 79,942 | 303 | 5,789 | 975 | 12,290 | ... | 459 | 7,729 |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Total ... | 120,643 | 8 | 306 | 417 | 1,048 | 116 | 39,185 | 103,903 | 34,344 | 60,732 | 360,702 | 1,982 | 32,655 | 5,256 | 62,163 | ... | 1,135 | 26,883 |
| 3 | Panch Maháls ... | Rayatwári .. .. | 54,803 | 30 | 420 | 277 | 1,771 | 67 | 42,488 | 15,313 | 38,133 | 8,079 | 161,381 | 1,871 | 16,622 | 2,976 | 26,823 | ... | 166 | 5,962 |
| | | Other Government | 16,076 | 3 | 149 | 68 | 467 | 67 | 14,330 | 4,455 | 11,125 | 2,404 | 49,144 | 573 | 5,766 | 2,099 | 7,899 | ... | 46 | 1,753 |
| | | Alienated .. .. | 11,762 | 15 | 77 | 54 | 257 | 28 | 10,504 | 2,685 | 9,059 | 1,293 | 35,734 | 280 | 4,587 | 508 | 5,708 | ... | 76 | 1,246 |
| | | Total ... | 82,641 | 48 | 646 | 399 | 2,495 | 162 | 67,322 | 22,453 | 58,317 | 11,776 | 246,259 | 2,724 | 26,975 | 5,583 | 40,430 | ... | 288 | 8,961 |
| 4 | Broach ... ... | Rayatwári .. .. | 56,879 | 10 | 95 | 111 | 1,025 | 51 | 11,243 | 29,361 | 15,861 | 18,376 | 133,012 | 2,344 | 21,322 | 13,264 | 27,714 | ... | 3,100 | 15,907 |
| | | Other Government | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Total ... | 56,879 | 10 | 95 | 111 | 1,025 | 51 | 11,243 | 29,361 | 15,861 | 18,376 | 133,012 | 2,344 | 21,322 | 13,264 | 27,714 | ... | 3,100 | 15,907 |
| 5 | Surat ... ... | Rayatwári .. .. | 101,718 | 4,363 | 368 | 217 | 6,948 | 390 | 61,065 | 42,306 | 72,400 | 31,060 | 320,835 | 986 | 59,970 | 30,433 | 49,345 | 993 | 8,368 | 27,921 |
| | | Other Government | 704 | 62 | .. | 1 | 51 | .. | 659 | 348 | 875 | 274 | 2,974 | 1 | 178 | 39 | 397 | 7 | 57 | 233 |
| | | Alienated .. | 674 | 20 | .. | 1 | .... | .. | 374 | 276 | 396 | 165 | 1,906 | 6 | 89 | 16 | 297 | 2 | 61 | 211 |
| | | Total ... | 103,096 | 4,445 | 368 | 219 | 6,999 | 390 | 62,098 | 42,930 | 73,671 | 31,499 | 325,715 | 993 | 60,237 | 30,488 | 50,039 | 1,002 | 8,486 | 28,365 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. ... | 309,791 | 2,528 | 4,050 | 544 | 19,817 | 2,262 | 194,613 | 96,099 | 133,364 | 57,195 | 820,263 | 18,747 | 36,425 | 114,714 | 87,975 | 17,948 | 29,064 | 58,004 |
| | | Other Government | 16,328 | 136 | 115 | 39 | 469 | 22 | 17,170 | 2,638 | 19,923 | 1,534 | 58,374 | 312 | 12 | 2,466 | 8,015 | 73 | 205 | 2,399 |
| | | Alienated .. .. | 9,422 | 36 | 131 | 55 | 899 | 130 | 5,462 | 2,554 | 3,548 | 1,601 | 23,838 | 623 | 1,258 | 3,187 | 1,893 | 860 | 805 | 1,337 |
| | | Total ... | 335,541 | 2,700 | 4,296 | 638 | 21,185 | 2,414 | 217,245 | 101,291 | 156,835 | 60,330 | 902,475 | 19,682 | 37,695 | 120,367 | 97,883 | 18,881 | 30,074 | 61,740 |
| 7 | Násik ... ... | Rayatwári .. .. | 194,841 | 23,769 | 3,025 | 271 | 11,683 | 574 | 166,180 | 29,547 | 96,811 | 16,470 | 543,171 | 13,344 | 124,053 | 98,697 | 44,426 | 24,482 | 10,731 | 18,289 |
| | | Other Government | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .. .. | .... | .... | .. | .... |
| | | Alienated .. | 12,750 | 1,489 | 150 | 29 | 681 | 27 | 7,695 | 1,636 | 4,590 | 813 | 29,860 | 713 | 6,906 | 4,924 | 2,642 | 1,862 | 693 | 1,369 |
| | | Total ... | 207,591 | 25,258 | 3,175 | 300 | 12,364 | 601 | 173,875 | 31,183 | 101,401 | 17,283 | 573,031 | 14,057 | 130,959 | 103,621 | 47,068 | 26,344 | 11,424 | 19,658 |
| 8 | Ahmadnagar ... | Rayatwári .. .. | 256,366 | 6,330 | 891 | 158 | 8,373 | 1,536 | 175,349 | 32,664 | 123,685 | 18,091 | 623,443 | 21,928 | 280,389 | 110,055 | 23,056 | 40,494 | 10,371 | 15,977 |
| | | Other Government | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | 30,137 | 175 | 87 | 40 | 933 | 228 | 18,457 | 3,042 | 13,503 | 1,752 | 68,354 | 2,661 | 36,390 | 13,783 | 3,706 | 4,472 | 1,038 | 1,720 |
| | | Total ... | 286,503 | 6,505 | 978 | 198 | 9,306 | 1,764 | 193,806 | 35,706 | 137,188 | 19,843 | 691,797 | 24,589 | 316,779 | 123,838 | 26,762 | 44,966 | 11,409 | 17,697 |
| 9 | Poona ... ... | Rayatwári .. .. | 218,669 | 8,195 | 828 | 235 | 6,914 | 1,032 | 127,714 | 38,378 | 81,456 | 20,157 | 503,578 | 11,986 | 235,458 | 70,599 | 25,435 | 24,203 | 2,362 | 18,436 |
| | | Other Government | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .. | .. .. | .... | .... | .. | .. .. |
| | | Alienated .. .. | 43,551 | 475 | 112 | 20 | 847 | 80 | 21,881 | 6,175 | 11,430 | 3,231 | 87,802 | 1,848 | 24,424 | 10,995 | 2,539 | 4,983 | 238 | 4,089 |
| | | Total ... | 262,220 | 8,670 | 940 | 255 | 7,761 | 1,112 | 149,595 | 44,553 | 92,886 | 23,388 | 591,380 | 13,834 | 259,882 | 81,594 | 27,974 | 29,186 | 2,600 | 22,525 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. | 175,559 | 11,792 | 915 | 208 | 7,186 | 2,683 | 107,962 | 35,291 | 83,929 | 21,985 | 447,520 | 11,602 | 250,979 | 67,256 | 4,179 | 16,745 | 527 | 11,395 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. ... | 12,541 | 878 | 159 | 26 | 220 | 86 | 8,171 | 2,105 | 6,119 | 1,497 | 31,802 | 794 | 31,456 | 5,083 | 233 | 1,348 | 32 | 553 |
| | | Total ... | 188,110 | 12,670 | 1,074 | 234 | 7,406 | 2,769 | 116,133 | 37,396 | 90,048 | 23,482 | 479,322 | 12,396 | 282,435 | 72,339 | 4,412 | 18,093 | 559 | 11,948 |
| 11 | Sátára ... | Rayatwári .. ... | 189,836 | 18,202 | 538 | 193 | 5,168 | 1,119 | 110,488 | 60,603 | 75,884 | 36,017 | 498,048 | 12,960 | 307,073 | 69,597 | 19,287 | 19,211 | 781 | 17,774 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated ... .. | 44,553 | 5,115 | 153 | 45 | 1,379 | 206 | 25,787 | 14,627 | 16,494 | 8,466 | 116,825 | 2,166 | 52,785 | 15,023 | 6,324 | 4,453 | 132 | 3,841 |
| | | Total ... | 234,389 | 23,317 | 691 | 238 | 6,547 | 1,325 | 136,275 | 75,230 | 92,378 | 44,483 | 614,873 | 15,126 | 359,858 | 84,620 | 25,611 | 23,664 | 913 | 21,615 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. | 135,135 | 36,879 | 3,849 | 1,020 | 8,178 | 1,305 | 86,191 | 61,829 | 73,301 | 38,391 | 446,078 | 5,579 | 170,678 | 66,763 | 45,760 | 9,719 | 478 | 23,597 |
| | | Other Government | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. ... | 31,787 | 6,564 | 579 | 64 | 1,283 | 410 | 18,665 | 14,151 | 15,093 | 8,897 | 97,493 | 1,412 | 50,277 | 15,282 | 7,346 | 2,399 | 82 | 3,678 |
| | | Total ... | 166,922 | 43,443 | 4,428 | 1,084 | 9,461 | 1,715 | 104,856 | 75,980 | 88,394 | 47,288 | 543,571 | 6,991 | 220,955 | 82,045 | 53,106 | 12,118 | 560 | 27,275 |
| 13 | Bijápur .. | Rayatwári .. .. | 166,810 | 9,399 | 555 | 159 | 4,794 | 2,879 | 105,454 | 52,418 | 112,295 | 38,140 | 492,903 | 9,831 | 171,514 | 128,472 | 37,464 | 9,514 | 163 | 11,245 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated ... .. | 22,135 | 1,258 | 182 | 26 | 403 | 507 | 14,639 | 6,852 | 14,985 | 5,088 | 66,075 | 1,032 | 25,884 | 19,847 | 5,974 | 1,026 | 25 | 1,272 |
| | | Total ... | 188,945 | 10,657 | 737 | 185 | 5,197 | 3,386 | 120,093 | 59,270 | 127,280 | 43,228 | 558,978 | 10,863 | 197,398 | 148,319 | 43,438 | 10,540 | 188 | 12,517 |
| 14 | Dhárwár ... | Rayatwári .. .. | 198,542 | 23,423 | 1,950 | 367 | 11,514 | 1,458 | 104,887 | 70,958 | 117,949 | 55,914 | 586,962 | 5,093 | 119,061 | 97,300 | 87,018 | 5,689 | 371 | 42,846 |
| | | Other Government.. | 28 | .... | .. | .. | .... | .. | 32 | 14 | 46 | 17 | 137 | .... | 2 | .... | 12 | .... | .. | 2 |
| | | Alienated .. . | 14,309 | 2,997 | 223 | 30 | 718 | 90 | 9,280 | 5,352 | 10,177 | 4,456 | 47,632 | 398 | 4,086 | 6,232 | 7,256 | 258 | 18 | 2,815 |
| | | Total ... | 212,879 | 26,420 | 2,173 | 397 | 12,232 | 1,548 | 114,199 | 76,324 | 128,172 | 60,387 | 634,731 | 5,491 | 123,149 | 103,532 | 94,286 | 5,947 | 389 | 45,663 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári .. .. | 125,900 | 45,274 | 364 | 126 | 8,268 | 487 | 107,588 | 22,438 | 93,205 | 17,496 | 421,146 | 1,111 | 2,929 | 36,051 | 78,745 | .... | 3,915 | 22,648 |
| | | Other Government.. | 193 | 81 | 2,373 | 16 | .... | .. | 636 | 44 | 102 | 26 | 3,471 | 113 | .... | 113 | 98 | .... | 10 | 45 |
| | | Alienated .. .. | 2,464 | 599 | 4 | 2 | 129 | 4 | 1,332 | 317 | 989 | 183 | 6,023 | 41 | 30 | 480 | 1,346 | .... | 116 | 625 |
| | | Total ... | 128,557 | 45,954 | 2,741 | 144 | 8,397 | 491 | 109,556 | 22,799 | 94,296 | 17,705 | 430,640 | 1,265 | 2,959 | 36,644 | 80,189 | ... | 4,041 | 23,318 |
| 16 | Kolába ... | Rayatwári .. .. | 34,566 | 18,316 | 319 | 137 | 2,459 | 455 | 29,328 | 10,535 | 25,160 | 7,905 | 129,180 | 448 | 1,061 | 13,101 | 23,900 | .... | 956 | 4,231 |
| | | Other Government.. | 28,237 | 9,621 | 190 | 81 | 268 | 29 | 24,290 | 5,619 | 15,825 | 3,869 | 88,020 | 115 | 501 | 7,067 | 18,409 | .... | 91 | 446 |
| | | Alienated .. .. | 293 | 222 | .. | .. | 2 | .. | 247 | 43 | 224 | 30 | 1,061 | 1 | .... | -50 | 252 | .... | 6 | 12 |
| | | Total ... | 63,096 | 28,159 | 509 | 218 | 2,729 | 484 | 53,865 | 16,197 | 41,209 | 11,804 | 218,270 | 564 | 1,562 | 20,218 | 42,561 | ... | 1,053 | 4,689 |
| 17 | Ratnágiri ... | Rayatwári .. . | 12,016 | 2,372 | 27 | 11 | 1,615 | 312 | 6,749 | 2,609 | 3,362 | 935 | 30,038 | 42 | 77 | 2,924 | 7,049 | .... | 24 | 810 |
| | | Other Government.. | 89,872 | 17,643 | 88 | 15 | 489 | 177 | 66,943 | 17,360 | 26,856 | 6,671 | 226,114 | 193 | 2,581 | 20,797 | 53,180 | .... | 77 | 475 |
| | | Alienated .. .. | 1,785 | 481 | 6 | 2 | 74 | 8 | 915 | 469 | 719 | 294 | 4,753 | 5 | .... | 768 | 1,182 | .... | .. | 19 |
| | | Total ... | 103,703 | 20,496 | 121 | 28 | 2,178 | 497 | 74,607 | 20,438 | 30,937 | 7,900 | 260,905 | 240 | 2,658 | 24,489 | 61,411 | ... | 101 | 1,304 |
| 18 | Kánara ... | Rayatwári .. .. | 75,042 | 25,150 | 5,708 | 982 | 5,140 | 983 | 73,442 | 23,992 | 48,121 | 9,687 | 268,247 | 389 | 2,298 | 3,160 | 44,442 | 4 | 77 | 5,451 |
| | | Other Government.. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .... |
| | | Total ... | 75,042 | 25,150 | 5,708 | 982 | 5,140 | 983 | 73,442 | 23,992 | 48,121 | 9,687 | 268,247 | 389 | 2,298 | 3,160 | 44,442 | 4 | 77 | 5,451 |
| | Total A. ... | Rayatwári .. .. | 2,489,212 | 236,081 | 24,921 | 5,624 | 115,017 | 18,461 | 1,596,589 | 756,546 | 1,253,117 | 464,937 | 6,960,505 | 122,969 | 1,851,163 | 943,277 | 720,968 | 169,037 | 72,945 | 332,805 |
| | | Other Government.. | 227,494 | 27,588 | 3,304 | 514 | 2,858 | 533 | 162,836 | 92,139 | 93,232 | 43,357 | 653,655 | 4,238 | 36,842 | 51,630 | 124,700 | 522 | 1,150 | 21,755 |
| | | Alienated ... .. | 244,247 | 20,327 | 1,881 | 422 | 7,873 | 1,828 | 146,241 | 63,129 | 108,178 | 38,657 | 632,783 | 12,218 | 239,831 | 97,618 | 49,232 | 21,737 | 3,373 | 23,794 |
| | Grand Total ... | | 2,960,953 | 283,996 | 30,106 | 6,560 | 125,748 | 20,822 | 1,905,466 | 911,814 | 1,454,527 | 546,951 | 8,246,943 | 139,425 | 2,127,836 | 1,092,525 | 894,900 | 191,296 | 77,468 | 378,354 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | Not available | | | | | | | | | | | | | | | | | |
| 20 | Hyderabad ... ... ... | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur ... ... ... ... | | | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier ... ... | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar ... ... ... | | | | | | | | | | | | | | | | | | | |

## Accompaniment to Return No. III.

*Number of principal Fruit-bearing Trees, 1887 ...*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy Palm. | Date Palm. |
|---|---|---|---|---|---|---|---|
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad... ... | 40,803 | 11,603 | ... | ... | 42 | ... |
| 2 | Kaira ... ... | 213,423 | 21,980 | ... | 20 | 13 | ... |
| 3 | Panch Maháls ... | 33,259 | 4,392 | ... | ... | 128,776 | ... |
| 4 | Broach ... ... | 20,011 | 5,449 | ... | 100 | 6,366 | 318 |
| 5 | Surat ... ... | 176,105 | 72,268 | 3,379 | 6,127 | 60,007 | 746,794 |
| | Total ... | 483,601 | 115,692 | 3,379 | 6,247 | 195,204 | 747,112 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 160,131 | 8,716 | 1 | 108 | 219 | 1,143 |
| 7 | Násik ... ... | 173,671 | 6,907 | 110 | 108 | 15 | 34,402 |
| 8 | Ahmadnagar ... | 65,516 | 9,723 | 16 | 218 | ... | 1,104 |
| 9 | Poona ... ... | 104,855 | 6,249 | 596 | 991 | 7,955 | ... |
| 10 | Sholápur ... ... | 27,801 | 6,489 | ... | 75 | ... | 57,463 |
| 11 | Sátára ... ... | 158,181 | 10,454 | 6,175 | 1,547 | ... | 225 |
| | Total ... | 690,155 | 48,538 | 6,898 | 3,047 | 8,189 | 94,337 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 103,023 | 21,976 | 10,738 | 1,762 | ... | ... |
| 13 | Bijápur ... ... | 77,306 | 23,953 | 46 | 2,118 | 97 | 455,874 |
| 14 | Dhárwár ... ... | 155,796 | 50,201 | 6,930 | 50,054 | 13 | 397,745 |
| | Total ... | 336,125 | 96,130 | 17,714 | 53,934 | 110 | 853,619 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... | 106,190 | 11,236 | 2,444 | 31,652 | 60,392 | 13,397 |
| 16 | Kolába ... ... | 36,150 | 3,855 | 2,768 | 90,357 | 18,945 | 47 |
| 17 | Ratnágiri ... ... | 81,620 | 4,652 | 57,927 | 295,058 | ... | ... |
| 18 | Kánara ... ... | 114,904 | 13,979 | 88,161 | 1,042,681 | ... | ... |
| | Total ... | 338,864 | 33,722 | 151,300 | 1,459,748 | 79,337 | 13,444 |
| | Grand Total ... | 1,848,745 | 294,082 | 179,291 | 1,522,976 | 282,840 | 1,708,512 |

# STATISTICS.

## B.—RAINFALL.

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | ...1st January—10th April. |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini. ... ... | ...11th April—24th April. |
| | Bharani ... ... | ...25th April—8th May. |
| | Krittika ... ... | ...9th May—22nd May. |
| | Rohini ... ... | ...23rd May—4th June. |
| Monsoon-Kharíf— | | |
| 5th June to 14th August . | Mrig ... ... | ...5th June—19th June. |
| | Árdra ... ... | ...20th June—3rd July. |
| | Punarvasu... ... | ...4th July—17th July. |
| | Pushya ... ... | ...18th July—31st July. |
| | Áshlesha ... ... | .. 1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct . | Magha ... ... | ...15th August—27th August. |
| | Purva ... ... | ...28th August—10th September. |
| | Uttára ... ... | ...11th Sept.—24th September. |
| | Hast ... ... | ...25th Sept.—7th October. |
| | Chitra ... ... | ...8th October—21st October. |
| Late Rains— | | |
| 22nd Oct. to 30th Nov.... | Sváti ... ... | ...22nd October—3rd November. |
| | Vishákha ... ... | ...4th November—17th November. |
| | Anurádha ... | ...18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1886, except for very few stations. The rainy days are compared with those of the last year.

## West Khándesh, 1887.

| Rain Periods. | Dhulia. | | Pimpalner | | Nandurbar. | | Taloda. | | Sha'ha'da. | | Shirpur. | | Sindkheda. | | Amalner. | | Pa'rola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. | 0·27 | 1 | 0·70 | 2 | 0·07 | 1 | .. | .. | 0·75 | 3 | 1·24 | 5 | 0·24 | 1 | 0·36 | 1 | 0·23 | 2 |
| Monsoon-Kharif .. .. | 26·35 | 44 | 16·73 | 41 | 25·68 | 43 | 23·95 | 45 | 21·80 | 44 | 24·24 | 55 | 17·48 | 31 | 21·98 | 38 | 24·73 | 37 |
| Monsoon-Rabi .. . | 6·64 | 19 | 7·42 | 23 | 3·31 | 19 | 6·32 | 18 | 7·08 | 18 | 7·43 | 19 | 3·58 | 5 | 6·34 | 17 | 4·30 | 13 |
| Late Rains.. .. .. | 7·07 | 8 | 4·58 | 8 | 3·79 | 6 | 2·29 | 5 | 2·75 | 6 | 4·17 | 8 | 3·43 | 4 | 2·89 | 4 | 2·68 | 4 |
| Total .. | 40·33 | 72 | 29·43 | 74 | 32·85 | 69 | 32·56 | 68 | 32·38 | 71 | 37·08 | 87 | 24·73 | 41 | 31·57 | 60 | 31·94 | 56 |
| Average .. | 25·79 | 66 | 27·42 | 83 | 32·67 | 66 | 34·96 | 70 | 31·56 | 61 | 27·56 | 88 | 22·95 | 47 | 28·05 | 58 | 32·08 | 72 |

*General characteristics.*—A hilly and rugged tract except where the wide black soil plains extend on either side of the Tápti and its tributaries. Rainfall very heavy in the dángs.

*Remarks.*—Rain much above average in Dhulia and Shirpur, elsewhere up to average. Ante-monsoon showers scantier here than in the eastern division. South-west monsoon broke punctually with Mrig (5th June) and the fall was favourable to begin kharif sowings which were continued during the partial break in A'rdra. July rain was heavy and continuous in Punarvasu but the short break in the beginning of Pushya was favourable for cotton weeding and bájri sowing. Rain in August fell in light showers and weeding and sowing were continued. Purvá rain was favourable, particularly valuable in Pimpalner where previous rain deficient. Rain in October was deficient and break injuriously long for standing crops; rabi sowings retarded and much anxiety was felt. But the late rain in Vishákha very valuable for rabi prospects though it damaged cotton, tili and reaped bájri. Year's rain on the whole not very seasonable, both early and late falls excessive and outturn of both kharif and rabi variable.

## East Khándesh, 1887.

| Rain Periods. | Chá'lisgaon. | | Pa'chora. | | Bhadgaon. | | Erandol. | | Chopda. | | Jalgaon. | | Ja'mner. | | Bhusa'val. | | Edalá'ba'd | | Sa'vda. | | Ya'val. | | Ra'ver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·03 | 1 | 0·04 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·16 | 1 |
| Ante-Monsoon .. | 2·76 | 4 | 0·54 | 2 | 0·57 | 2 | 1·19 | 4 | 0·87 | 4 | 1·72 | 4 | 1·10 | 1 | 1·05 | 3 | 2·68 | 4 | 1·75 | 4 | 0·04 | 1 | 0·96 | 3 |
| Monsoon-Kharif .. | 23·73 | 50 | 26·44 | 49 | 21·57 | 44 | 20·87 | 50 | 28·23 | 50 | 25·50 | 53 | 29·32 | 43 | 20·05 | 42 | 18·01 | 36 | 16·41 | 43 | 16·39 | 33 | 19·45 | 35 |
| Monsoon-Rabi .. | 24·74 | 22 | 11·47 | 24 | 11·01 | 17 | 11·44 | 24 | 5·68 | 23 | 10·10 | 24 | 14·62 | 18 | 9·68 | 11 | 9·76 | 20 | 10·58 | 22 | 6·56 | 16 | 6·18 | 15 |
| Late Rains .. | 5·86 | 9 | 1·52 | 5 | 3·50 | 7 | 2·88 | 6 | 2·70 | 4 | 2·60 | 5 | 3·22 | 3 | 2·30 | 3 | 2·64 | 4 | 2·67 | 5 | 2·75 | 3 | 1·65 | 3 |
| Total .. | 57·09 | 85 | 39·97 | 80 | 36·65 | 70 | 36·38 | 84 | 37·51 | 82 | 39·96 | 87 | 48·26 | 65 | 33·08 | 59 | 33·09 | 64 | 31·41 | 74 | 25·74 | 53 | 28·40 | 57 |
| Average .. | 29·70 | 66 | 29·51 | 72 | 31·29 | 72 | 31·12 | 73 | 31·58 | 79 | 33·42 | 83 | 34·84 | 74 | 35·18 | 67 | 28·78 | 57 | 28·95 | 64 | 34·44 | 62 | 33·56 | 71 |

*General characteristics.*—In the north, high hills of the Sátpudas. The southern and western portions are also hilly but the hills less high and continuous. It is drained by the Tápti, the Girna and the Purna. Rainfall larger than in the West Khándesh but less certain.

*Remarks.*—Rain above average in southern and central tálukás. Good preparatory showers general in Bharani and local in Rohini. Regular monsoon began with Mrig but the fall was not sufficient to begin sowing. Rain in A'rdra was generally heavy and kharif sowings in full swing in the first half of July. Rain in August was excessively heavy in south. Rain continued till end of Purva (10th September) being abnormally heavy at Chálisgaon. The prolonged break in October was occasionally relieved by light showers and no injury therefore resulted as in west. Chitra rain favourable for rabi sowing though it was slightly heavy for wheat seedlings in places. Vishákha rain was also favourable for rabi prospects; it was not so heavy as in west though it did some injury to kharif crops by blackening reaped bájri and damaging tili and cotton in places. On the whole season for both kharif and rabi was much better than in the Western Division but the outturn of local cotton was indifferent while irrigated wheat was much damaged and linseed a total failure owing to rust. The rabi sown area was unusually large, wheat being taken in land where bájri failed.

## Násik, 1887.

| Rain Periods. | Násik. | | Igatpuri. | | Sinnar. | | Nipha'd. | | Yeola. | | Na'nd-gaon. | | Ma'le-gaon. | | Sata'na. | | Kalvan. | | Cha'ndor. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 0·62 | 3 | 2·59 | 4 | 0·84 | 2 | 1·47 | 2 | 1·80 | 3 | 1·79 | 3 | 0·74 | 4 | 0·88 | 4 | 1·58 | 1 | 1·40 | 1 | 0·80 | 1 | 1·45 | 4 |
| Monsoon-Khárif ... | 15·09 | 59 | 131·98 | 70 | 11·30 | 53 | 14·63 | 45 | 10·79 | 46 | 19·89 | 41 | 14·64 | 39 | 10·58 | 30 | 13·06 | 40 | 15·86 | 46 | 18·04 | 50 | 74·66 | 66 |
| Monsoon-Rabi ... | 13·12 | 28 | 32·30 | 41 | 10·67 | 34 | 6·81 | 25 | 6·74 | 24 | 13·13 | 19 | 8·18 | 20 | 6·65 | 11 | 9·05 | 23 | 9·97 | 17 | 8·14 | 19 | 22·04 | 32 |
| Late Rains... ... | 4·72 | 8 | 3·22 | 6 | 4·11 | 8 | 4·85 | 7 | 7·40 | 9 | 12·80 | 8 | 4·17 | 8 | 5·64 | 9 | 6·17 | 11 | 4·17 | 9 | 5·25 | 7 | 9·58 | |
| Total ... | 33·55 | 98 | 170·09 | 121 | 26·92 | 97 | 27·76 | 79 | 26·73 | 82 | 47·61 | 71 | 27·73 | 71 | 23·75 | 54 | 29·86 | 75 | 31·40 | 73 | 32·23 | 77 | 107·73 | 112 |
| Average ... | 33·74 | 106 | 130·08 | 145 | 27·21 | 94 | 22·68 | 64 | 21·88 | 63 | 28·13 | 80 | 25·36 | 58 | 24·11 | 55 | 34·82 | 69 | 29·48 | 66 | 32·43 | 75 | 92·36 | 104 |

*General characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—Rainfall above average in Dángi tálukás and in east, elsewhere up to average except Kalvan. Ante-monsoon showers mostly in Bharani were generally lighter than previous year. Regular monsoon set in with Mrig and sowings of rice and nágli began in Dángi villages as well as of other kharif crops in extreme east; elsewhere rain not sufficient and sowings retarded. Good rain, however, came in July with Punarvasu and sowings were favourably continued though at end of month break desirable for their completion. Rainfall in August was generally sufficient and seasonable for transplanting rice and nágli and sowing bájri. Purva rain throughout favourable for standing crops especially in Sinnar and Báglán where previous fall insufficient. This followed by partial break favourable for weeding but continued too long for all standing crops. Some relief came with Chitra but the fall not up to requirements in east. Vishákha rain in early November was generally heavy especially at Nándgaon, very favourable for rabi sowings though it caused much injury to ripe bájri, tili and cotton. Rabi prospects were fine but subsequently marred a little by cloudy and misty weather affecting tur, gram and linseed. On the whole kharif season was fairly good and outturn estimated at 8—12 annas. The rabi was better and but for an excess of rain in January would have been an excellent season.

## Ahmadnagar, 1887.

| Rain Periods. | 1 Nagar. | | 2 Pa'rner. | | 3 Shrigonda | | 4 Karjat. | | 5 Ja'mkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Ra'huri. | | 9 Kopar-gaon. | | 10 Sangam-ner. | | 11 Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·01 | 1 | ... | ... | 0·02 | 1 | ... | ... | ... | ... | 0·11 | 2 | ... | ... | ... | ... | ... | ... | 0·08 | 1 | ... | ... |
| Ante-Monsoon ... ... ... | 1·84 | 3 | 5·25 | 6 | 3·09 | 8 | 3·73 | 9 | 2·21 | 7 | 0·91 | 5 | 2·03 | 5 | 1·67 | 4 | 1·79 | 4 | 1·70 | 3 | 0·48 | 1 |
| Monsoon-Kharif ... ... | 6·48 | 35 | 7·78 | 35 | 5·21 | 29 | 7·42 | 18 | 9·75 | 29 | 9·40 | 38 | 8·26 | 30 | 8·55 | 25 | 5·22 | 21 | 7·27 | 41 | 12·79 | 41 |
| Monsoon-Rabi ... ... ... | 9·56 | 30 | 13·51 | 28 | 9·10 | 26 | 13·11 | 19 | 15·81 | 25 | 10·64 | 29 | 11·28 | 26 | 13·82 | 17 | 8·08 | 16 | 7·53 | 21 | 7·87 | 20 |
| Late Rains ... ... ... | 5·45 | 8 | 10·61 | 7 | 2·81 | 6 | 1·69 | 5 | 1·98 | 5 | 3·97 | 7 | 3·82 | 7 | 4·88 | 5 | 6·52 | 3 | 4·30 | 7 | 3·52 | 5 |
| Total ... ... ... | 23·34 | 77 | 37·15 | 76 | 20·23 | 70 | 25·95 | 51 | 29·75 | 66 | 25·03 | 81 | 25·39 | 68 | 28·92 | 51 | 21·61 | 44 | 20·88 | 73 | 24·66 | 67 |
| Average ... ... ... | 25·11 | 91 | 23·16 | 61 | 21·52 | 63 | 25·38 | 71 | 28·95 | 82 | 26·94 | 86 | 25·42 | 57 | 22·86 | 66 | 18·41 | 44 | 20·86 | 81 | 23·00 | 68 |

*General characteristics.*—*(1) Desh*—Godáveri valley (tálukás 6 to 9). Rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukás 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukás 1, 2, 5 and 10 between these valleys. Alternation of bare hill and treeless plain, with occasional fertile well-wooded tracts. Rain more regular. *(2) Dángs*—Half Akola has very heavy rain. Half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Fall above average at Párner and Ráhuri, elsewhere up to average. Rain in ante-monsoon period was heavy especially in south, useful for preparing land and sowing subordinate crops of mug, udid, &c. The monsoon rain in Mrig and Ardra in June was very scanty and kharif sowings were delayed. Good rain, however, came with Punarvasu (4th—17th July) sufficient for general sowings which were continued during subsequent break. August rain was generally light except in north and east where favourable for kharif crops, elsewhere rain badly wanted both for withering kharif and for preparation of land for rabi sowing. Purva rain was, however, excellent throughout. Rabi sowings begun by middle of September under favourable break in Uttara. October rain in Hast and Chitra, though in light showers, was very favourable to all crops. No rain fell in Sváti but the break was favourably relieved by heavy Vishákha rain which was excessive in Párner, slightly injurious to reaped bájri and young rabi jowári. Very little rain fell in December but the crops were slightly affected by blight induced by cloudy weather in places. The kharif was a moderate yield but the rabi area was very large and at the end of the year a heavy outturn was anticipated. Cloudy weather, however, spoilt the jowári in places, but the wheat crop was excellent.

## Poona, 1887.

| Rain Periods. | Poona. | | Paud. | | Vadgaon. | | Lona'vli. | | Khed. | | Ghoda. | | Junnar. | | Siru'r. | | Sa'svad. | | Supa. | | Ba'ra'mati. | | Inda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·36 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·04 | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 1·75 | 6 | 0·28 | 3 | 0·55 | 1 | 0·14 | 2 | 0·69 | 4 | 0·60 | 3 | 0·63 | 2 | 2·51 | 4 | 2·75 | 7 | 2·38 | 4 | 2·92 | 10 | 4·15 | 11 |
| Monsoon-Kharíf ... | 18·39 | 42 | 59·95 | 59 | 43·62 | 54 | 140·53 | 71 | 19·26 | 49 | 23·48 | 47 | 20·98 | 44 | 4·35 | 28 | 10·64 | 37 | 3·79 | 16 | 4·62 | 20 | 10·81 | 25 |
| Monsoon-Rabi ... | 8·80 | 25 | 12·77 | 40 | 13·55 | 29 | 34·26 | 43 | 9·29 | 28 | 11·01 | 25 | 10·29 | 22 | 14·08 | 22 | 15·09 | 23 | 13·88 | 18 | 13·06 | 21 | 15·70 | 28 |
| Late Rains .. | 3·15 | 6 | 4·78 | 5 | 4·57 | 7 | 2·22 | 6 | 3·02 | 5 | 5·37 | 5 | 7·72 | 8 | 5·62 | 7 | 3·72 | 6 | 4·33 | 4 | 4·06 | 8 | 2·11 | 7 |
| Total ... | 32·45 | 80 | 77·78 | 107 | 62·29 | 91 | 177·15 | 122 | 32·26 | 86 | 40·43 | 80 | 39·62 | 76 | 26·60 | 62 | 32·20 | 73 | 24·38 | 42 | 24·66 | 59 | 32·77 | 71 |
| Average ... | 31·06 | 99 | 60·16 | 120 | 64·93 | 127 | 158·04 | 125 | 24·66 | 103 | 30·14 | 85 | 28·67 | 84 | 21·73 | 75 | 23·25 | 92 | 20·32 | 49 | 22·72 | 79 | 24·78 | 81 |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli, and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukás are uncertain and irregular like the adjoining tálukás of Sholápur.

*Remarks.*—Fall above average everywhere except locally at Vadgaon. Preparatory showers were favourable in eastern tálukás. Monsoon opened with Mrig and the fall was good in north and west where sowings timely and full; elsewhere this and the following A'rdra rain was very scanty for kharíf sowing. Rain in Punarvasu was abundant all over, favourable for transplantation in west but excessive for bájri sowing in deshi parts. Purva rain in September was excellent both for kharíf crops and rabi sowings which were favourably completed by the middle of October. Heavy rain in Vishákha did some harm to kharíf in Khed and Junnar, but it was throughout beneficial for all rabi crops. Injury from blight not considerable. On the whole season for both kharíf and rabi was good throughout the district except in Bárámati Petha where the kharíf was indifferent and the outturn estimated at 10—14 annas.

## Sholápur, 1887.

| Rain Periods. | Sholápur. | | Bársi. | | Mádha. | | Karmála. | | Pandharpur. | | Sángola. | | Málsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·01 | 1 | 0·06 | 1 | 0·85 | 1 | 0·04 | 1 | 2·88 | 2 | ... | ... | ... | — |
| Ante-Monsoon . | 4·50 | 11 | 5·52 | 13 | 4·53 | 9 | 2·71 | 17 | 3·93 | 11 | 1·40 | 5 | 2·39 | 5 |
| Monsoon-Kharíf | 10·44 | 28 | 13·77 | 38 | 6·64 | 31 | 7·25 | 33 | 9·60 | 26 | 4·63 | 11 | 3·32 | 8 |
| Monsoon-Rabi . | 23·82 | 36 | 14·28 | 40 | 16·81 | 36 | 14·73 | 27 | 12·67 | 30 | 12·62 | 19 | 13·45 | 22 |
| Late Rains ... | 0·53 | 7 | 1·86 | 7 | 1·36 | 10 | 0·89 | 9 | 3·54 | 6 | 0·91 | 3 | 2·52 | 6 |
| Total ... | 39·30 | 83 | 35·49 | 99 | 30·19 | 87 | 25·62 | 87 | 32·62 | 75 | 19·56 | 38 | 21·68 | 41 |
| Average ... | 33·33 | 82 | 32·35 | 95 | 27·89 | 65 | 26·32 | 107 | 27·65 | 66 | 22·99 | 61 | 21·07 | 43 |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Rainfall above average except in western tálukás. Good preparatory showers all over the district. Monsoon opened very early in Rohini but rain in June was too deficient throughout the district to allow sowing except in Bársi. July rain in Punarvasu was generally sufficient for kharíf sowing except in Sángola and Málsiras where sowings were partial. Monsoon-rabi opened with good fall in Magha, highly favourable both to kharíf crops and for sowing rabi. September rain was also favourable for full rabi sowings which were completed during subsequent light showers. Here Vishákha rain was much lighter than elsewhere in the Deccan but more was not required as the previous falls were sufficient and seasonable. Rabi rain was seasonable on the whole especially in Sángola and Málsiras the chief rabi tálukás and the crops good except linseed, gram, and cotton which suffered from blight in places. Kharíf outturn estimated at 8—10 annas and rabi at 10—12 annas.

## Sátára, 1887.

| Rain Periods. | Sa'ta'ra. | | Koregaon. | | Wa'i. | | Khanda'la | | Medha. | | Malcolm-peth. | | Pa'tan. | | Kara'd. | | Peth. | | Shira'ra. | | Dahiva'di. | | Vaduj. | | Vita. | | Ta'sgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... .. | 0·32 | 1 | ... | ... | ... | ... | 0·75 | 2 | ... | ... | ... | ... | ... | ... | 0·05 | 1 | 0·31 | 2 | 0·68 | 1 | ... | ... | ... | ... | ... | ... | 0·20 | 1 |
| Ante-Monsoon ... | 3·05 | 9 | 4·19 | 8 | 1·09 | 6 | 2·33 | 6 | 1·81 | 3 | 2·10 | 7 | 4·30 | 6 | 4·82 | 14 | 3·15 | 12 | 2·62 | 2 | 2·41 | 7 | 2·02 | 5 | 3·40 | 10 | 5·10 | 11 |
| Monsoon-Kharif ... | 30·83 | 60 | 14·57 | 34 | 19·31 | 54 | 7·37 | 23 | 67·48 | 63 | 218·00 | 71 | 61·19 | 62 | 17·05 | 54 | 12·89 | 55 | 26·02 | 51 | 6·72 | 28 | 6·07 | 32 | 8·70 | 34 | 7·82 | 33 |
| Monsoon-Rabi ... | 8·52 | 31 | 6·61 | 20 | 8·48 | 31 | 9·83 | 16 | 11·78 | 29 | 67·60 | 52 | 10·95 | 38 | 9·07 | 34 | 7·41 | 30 | 7·47 | 11 | 13·69 | 25 | 13·30 | 20 | 8·62 | 21 | 11·73 | 23 |
| Late Rains ... ... | 4·23 | 11 | 3·56 | 5 | 3·79 | 6 | 5·33 | 5 | 3·36 | 4 | 4·41 | 6 | 9·34 | 6 | 6·30 | 9 | 4·69 | 11 | 4·90 | 5 | 3·32 | 9 | 3 37 | 6 | 1·94 | 4 | 1·62 | 3 |
| Total ... | 46·95 | 112 | 28·93 | 67 | 32·67 | 97 | 25·61 | 52 | 84·43 | 99 | 292·11 | 136 | 85·78 | 112 | 37·29 | 112 | 28·45 | 110 | 41·69 | 70 | 26·14 | 69 | 24·76 | 63 | 22·66 | 69 | 26·47 | 71 |
| Average ... | 40·84 | 112 | 27·68 | 75 | 32·47 | 104 | 21·45 | 56 | 70·49 | 98 | 268·08 | 149 | 67·85 | 101 | 31·64 | 104 | 29·43 | 94 | 37·88 | 98 | 20·51 | 79 | 21·85 | 74 | 24·71 | 76 | 28·49 | 73 |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—Rainfall above average everywhere except in south-east. Ante-monsoon showers in Bharani and Rohini were favourable. Monsoon set in generally about 3rd June, a day or two earlier and the Mrig rain was seasonable for kharif sowing in west but slightly deficient in east. Copious rain came with Punarvasu, very favourable for kharif sowing in eastern tálukas but slightly excessive in west even for rice and nágli transplantation. August rain was generally in light showers favourable for weeding and bájri sowing, but too light for standing crops; and hence the heavy rain in Purva was throughout beneficial, particularly in east where previous rain was deficient. Rain in October was very seasonable for rabi sowings the completion of which was rendered possible by a favourable break. But the rain in Vishákha in early November was heavy and did damage to some extent to ripening kharif crops and seedlings of rabi-jowári and gram in places though it proved beneficial to rabi crops all over. Estimated outturn for kharif ranges from 12—14 annas while that for rabi from 11—12 annas.

## Belgaum, 1887.

| Rain Periods. | Belgaum. | | Cha'ndgad | | Kha'na'-pur. | | Sampgaon. | | Saundatti. | | Murgod. | | Goka'k. | | Chikodi. | | Hukeri. | | Athni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 3·28 | 3 | 1·53 | 2 | 0·50 | 2 | ... | ... | 0·43 | 1 | 0·40 | 1 | 0·13 | 1 | 0·56 | 2 | 0·07 | 1 | 0·72 | 3 |
| Ante-Monsoon ... ... | 2·03 | 13 | 2·40 | 9 | 1·01 | 4 | 1·41 | 9 | 5·48 | 18 | 3·51 | 5 | 5·46 | 13 | 3·64 | 13 | 5·81 | 11 | 6·25 | 19 |
| Monsoon-Kharif ... ... | 29·16 | 61 | 79·02 | 62 | 50·12 | 50 | 12·16 | 49 | 8·21 | 35 | 6·64 | 26 | 7·21 | 29 | 11·41 | 48 | 9·66 | 28 | 5·54 | 33 |
| Monsoon-Rabi ... ... | 13·84 | 45 | 19·14 | 40 | 6·86 | 13 | 12·04 | 28 | 13·89 | 29 | 14·13 | 24 | 6·83 | 29 | 10·50 | 24 | 13·14 | 15 | 16·15 | 35 |
| Late Rains ... ... | 4·36 | 13 | 7·95 | 10 | 1·99 | 4 | 5·65 | 14 | 4·71 | 14 | 6·32 | 13 | 5·73 | 17 | 6·03 | 9 | 2·45 | 7 | 3·65 | 6 |
| Total ... | 52·67 | 135 | 110·04 | 123 | 60·48 | 73 | 31·26 | 100 | 32·72 | 97 | 31·00 | 69 | 25·36 | 89 | 32·14 | 96 | 31·13 | 62 | 32·31 | 96 |
| Average ... | 46·80 | 121 | 95·98 | 124 | 64·68 | 86 | 28·14 | 93 | 24·47 | 98 | 24·40 | 76 | 23·79 | 94 | 27·65 | 102 | 21·60 | 56 | 24·42 | 94 |

*General characteristics.*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—Rainfall above average everywhere except Khánápur. Ante-monsoon showers were less favourable in south-western rice tracts where specially required for early sowings. Monsoon commenced early in June and the rain generally favourable for kharif sowings except in black soil tracts. Rain in Punarvasu was heavy and throughout sufficient for general sowing and for rice transplantation. August rain was generally light except in Saundatti and Athni where favourable for cotton sowing. General good rain came with Purva, very beneficial to standing crops and for cotton sowing though not enough for rice. October rain was very seasonable and well distributed particularly beneficial to rice though slightly excessive for wheat and jowári in places. The late rains in Sváti and Vishaka were heavy in places where injurious to jowári, cotton, gram and wheat, but otherwise favourable for standing rabi. Damage by blight in Athni, elsewhere crops generally good. Rice outturn good (12 annas) in Belgaum and Parasgad tálukas; elsewhere poor (4—8 annas). Jowári and bájri from 7—12 annas.

## Bijápur, 1887.

| Rain Periods. | Bija'pur. | | Indi. | | Sindgi. | | Ba'geva'di. | | Muddebiha'l. | | Ba'galkot. | | Bilgi. | | Ba'da'mi. | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. .. | .. | .. | 0·11 | 1 | 0·02 | 1 | 0·04 | 2 | 0·05 | 1 | 0·27 | 2 | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. .. | 3·17 | 16 | 1·73 | 13 | 2·45 | 10 | 2·57 | 9 | 2·00 | 6 | 6·08 | 15 | 3·29 | 9 | 2·37 | 4 | 2·66 | 11 |
| Monsoon-Kharif .. .. .. | 4·56 | 34 | 7·74 | 29 | 14·76 | 28 | 8·56 | 33 | 4·27 | 24 | 7·74 | 34 | 6·11 | 25 | 6·22 | 16 | 3·65 | 25 |
| Monsoon-Rabi .. .. .. .. | 12·82 | 34 | 19·87 | 30 | 16·98 | 34 | 13·81 | 35 | 7·64 | 21 | 9·29 | 34 | 17·62 | 22 | 13·45 | 21 | 7·80 | 26 |
| Late Rains .. .. .. .. | 1·88 | 15 | 2·26 | 10 | 2·15 | 7 | 4·09 | 12 | 5·18 | 11 | 4·09 | 13 | 2·09 | 12 | 3·51 | 8 | 2·85 | 13 |
| Total .. | 22·43 | 99 | 31·71 | 83 | 36·36 | 80 | 29·07 | 91 | 19·14 | 63 | 27·47 | 98 | 29·11 | 68 | 25·55 | 49 | 16·96 | 75 |
| Average .. | 26·79 | 102 | 25·73 | 84 | 25·71 | 87 | 25·02 | 73 | 23·46 | 73 | 24·07 | 94 | 22·93 | 55 | 25·51 | 54 | 25·82 | 63 |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukas of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Rain generally above average except Bijápur, Muddebihál and Hungund. Ante-monsoon showers in Rohini were everywhere good and in places sufficient to begin sowing. But Mrig rain was very deficient and sowings were generally retarded. Sufficient rain came at end of June and enabled sowing to be taken up generally in north and west. July rain was again deficient throughout both for sowings and for young plants. Good and general rain came with Magha, rather heavy in north but generally beneficial to kharif crops and rabi sowings of cotton and jowári, except in Muddebihál and Hungund where fall all along very light. September rain was seasonable and well distributed; kharif crops much improved and rabi sowings in full swing. October rain also good though in places Sváti rain was heavy and injurious to reaped bájri. Late rains comparatively light and beneficial. Season on the whole fair and kharif outturn estimated at 8—10 annas. Rabi prospects good at first, but owing to adverse winds and blight outturn reduced to 7—9 annas.

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## Dhárwár, 1887.

| Rain Periods. | Dha'rwa'r. | | Mugud. | | Hubli. | | Kalghatgi. | | Banka'pur. | | Ha'ngal. | | Kod. | | Ra'nebennur. | | Karajgi. | | Gadag. | | Mundargi. | | Navalgund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 0·08 | 1 | 1·15 | 2 | 0·08 | 2 | .. | .. | 0·04 | 1 | 0·40 | 1 | 1·67 | 3 | 0·10 | 2 | .. | .. | .. | .. | | .. | 0·08 | 1 | 1·50 | 2 | .. | .. |
| Ante-Monsoon .. | 3·38 | 16 | 3·50 | 7 | 3·63 | 16 | 2·07 | 8 | 3·13 | 6 | 2·43 | 5 | 1·27 | 4 | 3·34 | 10 | 0·82 | 5 | 2·64 | 6 | 5·79 | 9 | 6·50 | 10 | 7·88 | 9 | 4·35 | 11 |
| Monsoon-Kharif .. | 15·39 | 45 | 20·08 | 48 | 9·82 | 36 | 17·96 | 43 | 8·54 | 42 | 22·35 | 41 | 10·28 | 33 | 4·88 | 22 | 8·51 | 40 | 4·32 | 20 | 2·44 | 7 | 6·65 | 20 | 3·05 | 13 | 8·63 | 25 |
| Monsoon-Rabi .. | 12·38 | 27 | 11·75 | 26 | 10·06 | 22 | 9·04 | 18 | 3·51 | 14 | 7·33 | 18 | 6·59 | 14 | 7·63 | 13 | 5·59 | 13 | 12·89 | 25 | 8·80 | 16 | 15·92 | 22 | 11·34 | 20 | 14·32 | 26 |
| Late Rains .. .. | 5·41 | 11 | 5·93 | 10 | 4·68 | 14 | 6·11 | 10 | 3·22 | 7 | 5·18 | 5 | 7·29 | 9 | 4·50 | 7 | 6·73 | 8 | 3·43 | 5 | 3·54 | 9 | 6·04 | 8 | 5·34 | 11 | 2·54 | 10 |
| Total .. | 36·64 | 100 | 42·41 | 93 | 28·27 | 90 | 35·18 | 79 | 18·44 | 70 | 37·69 | 70 | 27·10 | 63 | 20·40 | 54 | 21·65 | 66 | 23·28 | 56 | 20·57 | 41 | 35·19 | 61 | 29·11 | 55 | 29·84 | 72 |
| Average .. | 32·95 | 95 | 34·34 | 97 | 27·03 | 102 | 30·14 | 88 | 28·29 | 71 | 37·34 | 80 | 27·70 | 78 | 23·82 | 53 | 27·21 | 61 | 25·98 | 76 | 17·51 | 45 | 25·36 | 57 | 23·56 | 47 | 25·77 | 67 |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur tálukas are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: 'Good rain won't give a big crop, nor will bad rain bring famine.' This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Ante-monsoon showers heavy in black-soil tracts but deficient in the malád for rice sowing. Monsoon rain in Mrig, though light, was generally good and rice sowing begun, rather late, in the break following. Punarvasu rain was heavy and sufficient for rice and to begin jowári sowing in black soil except in north-east where fall irregular and insufficient for general sowings. August rain was very favourable in north-east for cotton and other rabi sowings but it was generally deficient for young crops of rice, jowári, &c., especially in south, where crops were dying. Purva rain was excellent in north-east tálukas and rabi sowing in full progress under subsequent break. Hast rain was also good. In the malád, however, Hast rain was very short for rice and other crops. Some relief came with Chitra in early October whereby rice improved. Late rains in Vishákha were rather heavy in places slightly damaging kharif jowári though beneficial to rabi. Year's rain, on the whole, though above average, was irregular and unfavourable. Kharif outturn estimated at 6—9 annas. Rabi crops especially wheat and exotic cotton suffered from blight and cloudy weather and outturn estimated at 8—9 annas. Fodder deficient owing to failure of jowári.

## Kánara, 1887.

| Rain Periods. | Ka'rwa'r. | | Ankola. | | Kumta. | | Honava'r. | | Bhatkal. | | Haliya'l. | | Supa. | | Yella'pur. | | Mundgod. | | Sirsi. | | Sidda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | .. | ... | ... | ... | ... | ... | 0·10 | 1 | ... | ... | 1·27 | 1 | 0·58 | 2 | 0·62 | 3 | 1·41 | 4 | 0·43 | 3 | 0·27 | 2 |
| Ante-Monsoon ... | 13·65 | 10 | 4·68 | 8 | 8·12 | 13 | 3·64 | 9 | 9·31 | 13 | 4·58 | 7 | 2·69 | 10 | 3·16 | 8 | 1·75 | 9 | 2·53 | 10 | 1·97 | 9 |
| Monsoon-Kharif ... | 89·88 | 68 | 105·66 | 62 | 102·24 | 67 | 97·99 | 68 | 98·43 | 67 | 27·20 | 60 | 69·36 | 68 | 71·58 | 69 | 22·23 | 60 | 67·72 | 71 | 80·49 | 68 |
| Monsoon-Rabi ... | 33·98 | 41 | 31·08 | 30 | 48·30 | 41 | 40·28 | 41 | 35·65 | 35 | 12·78 | 32 | 16·88 | 46 | 27·35 | 42 | 13·35 | 35 | 18·41 | 42 | 17·36 | 40 |
| Late Rains ... ... | 4·30 | 11 | 2·10 | 3 | 2·38 | 13 | 6·04 | 11 | 9·60 | 6 | 4·01 | 15 | 2·24 | 9 | 3·17 | 7 | 1·33 | 7 | 4·91 | 12 | 8·24 | 13 |
| Total ... | 141·81 | 130 | 143·52 | 103 | 161·64 | 134 | 148·05 | 130 | 152·99 | 121 | 49·84 | 115 | 91·75 | 135 | 105·88 | 129 | 40·57 | 115 | 94·00 | 138 | 108·33 | 132 |
| Average ... | 116·62 | 140 | 121·46 | 120 | 133·11 | 125 | 128·38 | 118 | 140·91 | 136 | 44·37 | 110 | 89·18 | 139 | 91·56 | 122 | 41·25 | 121 | 91·94 | 135 | 98·93 | 145 |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The lowland or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—Year's rainfall much above average especially on coast. Ante-monsoon showers useful for early sowings of rice. Regular monsoon set in on 3rd or 4th June and the fall was heavy and continuous throughout the district being slightly excessive in places. But a partial break followed in A'rdra very favourable for completing rice sowing and for healthy growth of plants. July rain sufficient and seasonable for transplantation which was completed and weeding commenced by the end of the month. Rain in August and September was also sufficient on coast but not enough in upland tálukas especially at Haliyál and Mundgod where crops began to fail owing to deficiency of previous falls. But the general heavy fall of Chitra was very valuable in upland tálukas generally though excessive on coast injuring rice and retarding harvest. Late rains were not very heavy except in south where slightly injurious. Season good on the whole and outturn of rice estimated at 10—12 annas. Garden cultivation thrived well.

## Ratnágiri, 1887.

| Rain Periods. | Ratná-giri. | | Vengúrla. | | Ma'lvan. | | Devgad. | | Ra'ja'pur. | | Sanga-meshvar. | | Chiplun. | | Guhagar. | | Khed. | | Da'pole. | | Mandan-gad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·02 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 1·10 | 11 | 1·05 | 13 | 1·59 | 6 | 1·83 | 4 | 1·76 | 5 | 1·68 | 8 | 1·64 | 2 | 0·32 | 2 | 2·99 | 5 | 1·68 | 5 | 0·70 | 4 |
| Monsoon-Kharif ... | 76·06 | 71 | 100·70 | 69 | 91·04 | 55 | 66·12 | 57 | 97·15 | 67 | 110 10 | 71 | 102·76 | 70 | 75·64 | 64 | 90·91 | 60 | 106·79 | 71 | 101·04 | 70 |
| Monsoon-Rabi ... | 26·60 | 42 | 29·12 | 42 | 24·82 | 29 | 28·07 | 34 | 26·54 | 42 | 38·43 | 50 | 32·67 | 42 | 20·98 | 35 | 32·41 | 36 | 25·73 | 42 | 35·76 | 41 |
| Late Rains ... ... | 2·41 | 6 | 6·86 | 10 | 0·95 | 2 | 2·73 | 5 | 5·23 | 8 | 5·71 | 6 | 4·16 | 5 | 1 84 | 2 | 4·05 | 5 | 2·44 | 3 | 2·78 | 5 |
| Total ... | 106·19 | 131 | 137·73 | 134 | 118·40 | 92 | 98·75 | 100 | 130·68 | 122 | 155·92 | 135 | 141·23 | 110 | 98·78 | 103 | 130·36 | 106 | 136·64 | 121 | 140·22 | 120 |
| Average ... | 100·73 | 129 | 101·48 | 132 | 89 57 | 136 | 87·50 | 109 | 127·91 | 127 | 145·57 | 131 | 146·04 | 131 | 100·84 | 106 | 130·52 | 122 | 132·64 | 124 | 150·79 | 140 |

*General characteristics.*—The district is formed by a narrow belt of lowland; though hilly and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Ante-monsoon rain was generally in light showers and sowings of early rice began throughout. Monsoon opened punctually with Mrig and the fall was excessive, causing damage to seedlings and field embankments. A'rdra rain was lighter and good for further sowings, though insufficient for ploughing and transplanting. Rain in Punarvasu was throughout seasonable and sufficient for transplantation, but the rain in Pushya, at the end of July, was deficient, especially in south. August rain also was not quite enough except in north. But the heavy fall of Púrva in September was generally favourable for all crops except early rice, which was ready for reaping. Partial break in Uttara and Hast was favourable for harvesting early rice, but injurious to late rice. Heavy fall of Chitra on 12th—13th October was too late for rice, though favourable for other crops. Late rains in Sváti and Vishákha were lighter and favourable for rabi sowings. Year's rain, though much less than that of the previous year, was generally above average except in north. Season was fair on the whole and outturn estimated at 11 annas.

## Kola'ba, 1887.

| Rain Periods. | Alibág. | | Panvel. | | Uran. | | Pen. | | Roha. | | Mángaon. | | Manmád. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Ins. | | Ins. | |
| Early Rains ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 0·96 | 5 | 0·28 | 7 | 0·29 | 4 | 0·25 | 5 | 1·10 | 2 | 7·54 | 4 | 0·66 | 4 |
| Monsoon-Khárif ... | 77·39 | 69 | 101·09 | 70 | 95·39 | 68 | 104·54 | 71 | 90·61 | 69 | 101·08 | 67 | 94·74 | 68 |
| Monsoon-Rabi ... | 32·99 | 40 | 25·04 | 44 | 33·24 | 36 | 34·97 | 42 | 26·58 | 34 | 32·86 | 39 | 29·40 | 47 |
| Late Rains ... | 1·77 | 5 | 1·02 | 5 | 1·57 | 7 | 2·91 | 7 | 1·40 | 3 | 3·16 | 3 | 2·41 | 3 |
| Total ... | 113·11 | 119 | 127·43 | 126 | 130·49 | 115 | 142·67 | 125 | 119·69 | 108 | 144·64 | 113 | 127·21 | 122 |
| Average ... | 84·79 | 113 | 110·50 | 127 | 95·48 | 110 | 114·04 | 126 | 122·27 | 110 | 127·59 | 119 | 130·58 | 133 |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heavier in parts towards the Sahyádris.

*Remarks.*—Ante-monsoon rain generally in light showers except at Mángaon where abnormally heavy in Krittika. Regular monsoon broke with Mrig on 5th June and the fall was abundant and seasonable being nowhere excessive as in Ratnágiri. Sowings completed by end of June. July rain very favourable to transplantation, though slightly excessive in places. Rain in August and September was sufficient, seasonable and well distributed throughout the district; but in October deficient for rice. Late rains were also lighter except in south where useful for sowing of second crops of pulses, &c. Year's rain generally above average except in Roha and Mahád and crops on the whole good.

## Tha'na, 1887.

| Rain Periods. | Tha'na. | | Kalya'n. | | Karjat. | | Ma'the-ra'n. | | Kha'la-pur. | | Murba'd. | | Sha'ha'-pur. | | Mokha'da. | | Bhiwndi. | | Bassein. | | Va'da. | | Ma'him. | | Da'ha'nu. | | Umbar-gaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 1·16 | 2 | 0·18 | 4 | 1·85 | 2 | 1·39 | 5 | 1·66 | 2 | 1·52 | 3 | 1·90 | 4 | 0·60 | 1 | 0·03 | 1 | .. | .. | .. | .. | 0·04 | 2 | 0·08 | 1 | 0·21 | 1 |
| Monsoon-Kharif .. | 82·17 | 68 | 77·95 | 68 | 119·04 | 69 | 164·33 | 71 | 110·61 | 65 | 75·14 | 62 | 93·83 | 67 | 81·68 | 65 | 93·60 | 67 | 79·26 | 60 | 78·23 | 64 | 45·25 | 67 | 55·26 | 62 | 64·69 | 59 |
| Monsoon-Rabi .. | 18·98 | 35 | 20·31 | 38 | 28·63 | 43 | 40·81 | 40 | 41·42 | 37 | 30·10 | 32 | 21·59 | 38 | 19·07 | 33 | 19·81 | 36 | 17·35 | 34 | 17·64 | 33 | 11·74 | 28 | 14·25 | 27 | 10·58 | 21 |
| Late Rains .. .. | 0·73 | 3 | 1·18 | 6 | 0·10 | 1 | 2·47 | 6 | 0·50 | 2 | 3·20 | 4 | 1·80 | 5 | 2·97 | 7 | 0·60 | 2 | 1·33 | 4 | 1·22 | 2 | 0·68 | 4 | 1·11 | 5 | 0·96 | 2 |
| Total .. | 103·04 | 108 | 99·62 | 116 | 149·62 | 115 | 209·00 | 122 | 154·19 | 106 | 109·96 | 101 | 119·12 | 114 | 104·32 | 106 | 114·04 | 106 | 97·94 | 98 | 97·09 | 99 | 57·71 | 101 | 70·70 | 95 | 76·44 | 83 |
| Average .. | 99·12 | 120 | 100·73 | 120 | 126·91 | 126 | 209·71 | 130 | 122·09 | 111 | 96·15 | 106 | 111·34 | 104 | 100·92 | 114 | 101·79 | 120 | 78·85 | 91 | 95·96 | 100 | 62·67 | 102 | 71·39 | 78 | 64·83 | 85 |

*General characteristics.*—Inland, the district is well watered and well wooded. Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Rain in ante-monsoon period very light. Monsoon set in with Mrig and the rain was throughout sufficient for sowings which were seasonably completed by the end of June. Rain continued favourably to the end of Purva, *i.e.* about the middle of September, when came a general break favourable in the beginning but too long, causing injury to standing crops both rice and varkás, though it was occasionally relieved by light showers in places. In Bassein, Máhím and Mokháda rice crop injured by insect pest. The Vishákha rain in November was unnecessarily heavy in the eastern tálukas causing slight damage to reaped rice and varkas crops; it was however favourable to rabi sowing for which October rain was deficient. Rabi crops slightly suffered from cloudy weather in January 1888. Season was good on the whole, outturn of rice estimated at 12—13 annas and that of rabi at 12—14 annas.

## Surat, 1887.

| Rain Periods. | Surat. | | Olpád. | | Ránder. | | Mándvi. | | Bárdoli. | | Válod. | | Jalálpur. | | Chikhli. | | Balsár. | | Párdi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. | 0·50 | 1 | .. | .. | 0·66 | 1 | 0·07 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 0·95 | 1 | 0·14 | 1 |
| Monsoon-Kharif .. .. | 33·76 | 51 | 35·54 | 45 | 32·37 | 51 | 59·23 | 58 | 53·69 | 67 | 64·25 | 52 | 70·08 | 59 | 70·31 | 59 | 69·39 | 63 | 72·67 | 67 |
| Monsoon-Rabi .. .. | 3·36 | 16 | 2·55 | 3 | 1·84 | 13 | 5·85 | 18 | 5·30 | 24 | 6·67 | 17 | 5·27 | 15 | 16·38 | 25 | 13·37 | 27 | 15·23 | 27 |
| Late Rains.. .. .. | 2·01 | 6 | 1·14 | 4 | 2·26 | 6 | 2·93 | 7 | 1·51 | 7 | 3·71 | 6 | 1·41 | 3 | 2·63 | 7 | 2·40 | 4 | 3·57 | 6 |
| Total .. | 39·63 | 74 | 39·23 | 52 | 37·13 | 71 | 59·08 | 84 | 60·50 | 98 | 74·63 | 75 | 76·76 | 77 | 89·32 | 91 | 86·11 | 95 | 91·61 | 101 |
| Average .. | 44·06 | 72 | 35·52 | 55 | 42·95 | 81 | 65·27 | 81 | 53·82 | 100 | 61·31 | 70 | 58·96 | 73 | 77·63 | 84 | 74·43 | 90 | 71·49 | 91 |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east dángs with heavy rainfall but light soil. As a rule rain lighter on the coast than inland.

*Remarks.*—Monsoon set in about 6th June in south but four or five days later in north. Rice sowing commenced everywhere and after the general heavy fall of 16th June kharif sowings were in full swing and favourably carried on under partial break or light showers in A'rdra. July rain was favourable in the beginning, but at end of month it was very heavy especially in south, where it was excessive even for transplantation; young cotton and jowári were much damaged. Partial break with occasional good showers in Áshlesha and Magha in August generally favourable for re-sowing and weeding except in south, where crops suffered greatly owing to continuous heavy rainfall. A most valuable break came throughout the district from Uttara (11th September) and all crops began to improve. The break lasted too long for early crops. Vishákha rain in early November was highly beneficial to late-sown juár, cotton and rabi prospects in general. On the whole season fair. Abnormally heavy rain in July and the total failure of it in October reduced the outturn of kharif crops (jowári, bájri and cotton) below average. Rabi crops, wheat and other cereals injured by scanty late rain and heavy frost in February, the rest were fairly good and outturn estimated a 8—10 annas.

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## Broach, 1887.

| Rain Periods. | Broach. | | Ankleshvar. | | Hánsot. | | Vágra. | | A'mod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... ... | 29·70 | 54 | 32·42 | 47 | 27·75 | 38 | 27·06 | 45 | 37·38 | 33 | 31·13 | 48 |
| Monsoon-Rabi... ... ... | 3·12 | 9 | 3·02 | 4 | 3·93 | 8 | 2·62 | 8 | 1·69 | 5 | 2·58 | 7 |
| Late Rains ... ... ... | 1·39 | 5 | 1·03 | 5 | 1·40 | 5 | 0·65 | 5 | 2·71 | 5 | 0·72 | 5 |
| Total ... | 34·21 | 68 | 36·47 | 56 | 33·08 | 51 | 30·33 | 58 | 41·78 | 43 | 34·43 | 60 |
| Average ... | 44·21 | 66 | 41·41 | 67 | 34·24 | 46 | 30·61 | 60 | 41·75 | 43 | 39·46 | 66 |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being as a rule more plentiful in the Broach Táluka. The rainfall is supplemented by heavy dews from October to December.

*Remarks.*—Monsoon broke about 7th June, but light. Heavy and general rain came about 17th June at end of Mrig, followed by a week's break which was favourable for kharif sowings. Rain in July was heavy and continuous, damaging young crops and necessitating re-sowing in places. A fortnight's break in August (10th—24th) was very favourable for re-sowing and weeding. Crops generally improved and were kept in a thriving condition by the light showers of Magha and Purva. But the prolonged break in September and October caused much anxiety which was only partially removed by the moderate but general fall in early November. The year's rainfall was below the average but season fair on the whole. Kharif outturn variously estimated at from 7—12 annas and rabi at 7—14 annas. Cotton was tolerable though harvested late and some damage caused by cloudy weather and slight rainfall in February 1888.

## Kaira, 1887.

| Rain Periods. | Kaira. | | Mehmadabad. | | Ma'tar. | | Nadia'd. | | Kapadvanj. | | Tha'sra. | | A'nand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. | 0·19 | 1 | 0·08 | 1 | .. | .. | 0·22 | 1 | 0·10 | 1 | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. .. | 0·03 | 2 | .. | .. | .. | .. | 0·01 | 1 | 0·07 | 1 | .. | .. | .. | .. | .. | .. |
| Monsoon-Kharif .. .. | 39·72 | 50 | 29·08 | 47 | 27·83 | 41 | 40·09 | 51 | 32·02 | 44 | 31·01 | 44 | 36·01 | 48 | 34·76 | 47 |
| Monsoon-Rabi .. .. .. | 5·74 | 15 | 8·35 | 12 | 5·47 | 7 | 3·83 | 14 | 8·95 | 13 | 12·17 | 14 | 3·24 | 7 | 3·07 | 11 |
| Late Rains .. .. .. | 2·59 | 7 | 1·94 | 6 | 1·82 | 5 | 3·12 | 5 | 1·97 | 6 | 2·70 | 3 | 1·71 | 5 | 0·88 | 4 |
| Total .. | 48·27 | 75 | 39·45 | 66 | 35·12 | 53 | 47·27 | 72 | 43·11 | 65 | 45·88 | 61 | 40·96 | 60 | 38·71 | 62 |
| Average .. | 37·13 | 78 | 34·24 | 58 | 37·93 | 59 | 37·27 | 71 | 34·57 | 70 | 36·66 | 58 | 38·44 | 55 | 37·89 | 52 |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land; the centre, a tract of most fertile soil yielding the choicest crops; and westward a bare though well cultivated tract of rice land.

*Remarks.*—Year's fall generally above the average. Monsoon commenced on 8th June throughout the district. The opening showers were light and good for preparing land and for sowing kodra, &c. Kharíf sowing in full swing after the heavy and general fall of 17th June, and favourably continued under the partial break in Ardra. July rain heavy and continuous and though excessive for bájri, re-sowing of which was necessary in places, and tobacco, was favourable for rice transplantation and helped to destroy caterpillars—"katra", which were damaging young crops. A clear week's break about the middle of August was good for weeding, sowing of juár and re-sowing of bájri in places where it had been washed away. Rain in Magha and Purva was very seasonable; tobacco planting completed and all crops thriving, but long break in October considerably affected the crops; tobacco helped by irrigation where available. Vishákha rain everywhere beneficial for standing crops and for rabi sowing. Tobacco was damaged by late (January) rains. Season was good on the whole, tobacco excepted, and the outturn of various crops estimated at 8—12 annas.

## Panch Maháls, 1887.

| Rain Periods. | Godhra. | | Kálol. | | Hálol. | | Dohad. | | Jhálod. | | Jámbughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon . | ... | ... | ... | ... | ... | ... | 0·05 | 2 | ... | ... | ... | ... |
| Monsoon-Kharif. | 35·56 | 52 | 30·09 | 47 | 26·29 | 46 | 17·76 | 46 | 23·95 | 40 | 36·27 | 55 |
| Monsoon-Rabi... | 9·94 | 19 | 13·29 | 17 | 5·93 | 21 | 9·29 | 19 | 6·08 | 15 | 7·85 | 20 |
| Late Rains ... | 3·04 | 6 | 0·96 | 5 | 1·15 | 2 | 1·42 | 6 | 3·81 | 5 | 1·34 | 4 |
| Total ... | 48·54 | 77 | 44·34 | 69 | 33·37 | 69 | 28·52 | 73 | 33·84 | 60 | 45·46 | 79 |
| Average ... | 43·24 | 85 | 40·20 | 69 | 47·97 | 65 | 32·56 | 95 | 32·65 | 62 | 50·69 | 89 |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Light showers till 17th June; when heavy rain fell, everywhere sufficient to begin kharíf sowings which were favourably continued under the following break in Ardra except perhaps in the eastern division where the rain was rather deficient. Heavy rain commenced with Punarvasu (4th July) and continued to the end of Purva (10th September) with slight intermission about the beginning of Magha (the middle of August). Bájri and Maize had to be re-sown a second time and even a third time in some places (Kálol). Maize was pale and sickly and its growth stunted, and at end of August rice too began to feel the necessity of a clear break which came on 15th September. All crops showed signs of material improvement. The break, however, was prolonged and the late-sown maize and bájri began to wither; early maize and rice were too near maturity to suffer to any extent from the break and turned out fairly well. Late rains in Vishákha were favourable for rabi crops. On the whole season fairly good. Estimated outturn of maize and rice 8—12 annas; bájri and pulses 4—8 annas; rabi crops 8—12 annas.

## Ahmadabad, 1887.

| Rain Periods. | Ahmadabad. | | Para'ntij. | | Moda'sa. | | Sa'nand. | | Viramga'm. | | Dholka. | | Dhandhuka. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·25 | 1 | 0·50 | 1 | ... | ... |
| Ante-Monsoon ... | 0·38 | 1 | ... | ... | 0·14 | 1 | ... | ... | ... | ... | ... | ... | 0·05 | 1 | 0·02 | 1 |
| Monsoon-Kharif ... | 21·77 | 38 | 15·74 | 42 | 29·56 | 45 | 23·23 | 47 | 26·70 | 51 | 30·83 | 49 | 21·50 | 45 | 23·03 | 40 |
| Monsoon-Rabi ... | 2·52 | 8 | 5·11 | 10 | 4·54 | 15 | 2·28 | 5 | 4·05 | 9 | 5·55 | 14 | 1·47 | 10 | 4·08 | 14 |
| Late Rains ... ... | 0·57 | 3 | 1·30 | 4 | 1·43 | 4 | 0·56 | 3 | 0·27 | 4 | 1·36 | 5 | 1·38 | 5 | 1·64 | 3 |
| Total ... | 25·24 | 50 | 22·15 | 56 | 35·67 | 65 | 26·07 | 55 | 31·02 | 64 | 37·99 | 69 | 24·90 | 62 | 28·83 | 58 |
| Average ... | 29·92 | 59 | 30·08 | 60 | 37·32 | 67 | 31·09 | 64 | 28·22 | 65 | 36·39 | 68 | 27·92 | 60 | 27·35 | 72 |

*General characteristics.*—Except in the hilly parts of Modása where the supply is sometimes considerable, the rainfall throughout the district is generally very light.

*Remarks.*—Monsoon late and light at first. Heavy rain came on 17th June. This and the following break with one or two light showers in A'rdra were very favourable for full and general sowings. July rain was heavy, and though excessive in places, was generally favourable for rice transplantation and sówing of bájri, juár and cotton; though at end of month its continuance proved injurious to young crops re-sowing of which was necessitated in places. A week's break about the middle of August was very beneficial and allowed sufficient time for the completion of cotton sowing and re-sowing in places where young crops had been destroyed by the excessive rain of July. Magha and Purva showers were generally favourable. Very little rain fell in the first half of September and it was totally absent in October. This prolonged break considerably affected all kharif crops and delayed sowing of wheat and other rabi crops. Rice and cotton suffered most, though rice irrigated where possible. Bájri an early crop escaped much detriment. Vishá-kha' rain did much good to standing wheat and cotton and encouraged further sowing of rabi crops. Kharif crops, on the whole, fair. Cotton damaged by late rains in February and wheat by cloudy weather and red rust.

# APPENDIX A.

*Cattle Disease.*

**Referred to in para. 48 of the Report.**

| District. | Táluka. | Approximate date of outbreak. | Approximate date of subsiding. | REMARKS. |
|---|---|---|---|---|
| *Gujarát.* | | | | |
| Panch Maháls ... | Dohad ... ... ... ... | 9th May 1888 ... | 16th May 1888. | |
| Broach ... ... | Amod ... ... ... ... | 22nd February „ ... | 14th March „ | |
| Do. ... ... | Do. ... ... ... ... | 6th June „ ... | 13th June „ ... | Slight foot and mouth disease reported from A'mod Táluka. |
| Baroda... ... | Horse disease in Kodinár and cattle disease in Dhári. | 4th January „ ... | 18th January „ | |
| | Vijápur of Kadi division ... | 28th March „ ... | 11th April „ | |
| | Palsána and Veláchha ... | 18th April „ ... | 25th April „ | |
| | Sidápur ... ... ... ... | 2nd May „ ... | 27th June „ | |
| | Kadi and Navsári Division ... | 16th „ „ ... | | |
| | Dhári-Amreli Division... ... | 6th June „ ... | | |
| | Dhári-Kodinár, Shiyánagar, Kodinár and Amreli. | 11th July „ ... | 29th August „ | |
| *Deccan.* | | | | |
| Násik ... ... | Báglán ... ... ... ... | 2nd November 1887... | 9th November 1887. | |
| Do. ... ... | Kalyan ... ... ... ... | 4th January 1888 ... | 8th February 1888. | |
| Do. ... ... | Báglán, Málegaon and Nándgaon (25th July). | 20th June „ ... | 18th July in Báglán and 1st August in other tálukás. | |
| Poona ... ... | Haveli ... ... ... ... | 2nd November 1887... | 9th November. | |
| Sholápur ... ... | Pandharpur ... ... ... | „ „ „ ... | 16th November. | |
| Do. ... ... | Pandharpur, Karmála and Sholápur. | 28th December „ ... | 1st January 1888. | |
| Do. ... ... | Sholápur, Mádha, Karmála and Sángola. | 8th February 1888 ... | 15th February „ | |
| *Konkan.* | | | | |
| Thána ... ... | In 1 táluka ... ... ... | 2nd November 1887... | 9th November 1887. | |
| Kolába ... ... | Mángaon and Mahád ... ... | „ „ „ ... | 23rd November „ | |
| Do. ... ... | Roha, Mángaon and Mahád ... | 21st March 1888 ... | 23rd May 1888. | |
| Ratnágiri... ... | In 8 tálukas ... ... ... | 2nd November 1887... | 21st March „ | |
| Do. ... ... | In 2 tálukas ... ... ... | 12th September 1888. | 17th October „ | |
| Do. ... ... | In 3 tálukas ... ... ... | 31st October „ ... | Continues. | |
| Kánara ... ... | In 5 tálukas ... ... ... | 2nd November 1887... | 9th November 1887. | |
| Do. ... ... | Mundgod Petha ... ... | 18th July 1888 ... | 25th July. | |
| Do. ... ... | In 2 tálukas ... ... ... | 8th August „ ... | Continues till 31st October. | |
| *Karnátak.* | | | | |
| Dhárwár ... ... | Dhárwár ... ... ... | 2nd November 1887... | 9th November 1887. | |
| Do. ... ... | Gadag, Ránebennur, Nargund and Mundargi Petha. | 30th May 1888 ... | 6th June 1888. | |
| Do. ... ... | In 2 tálukas ... ... ... | 31st October „ ... | Continues. | |
| Bijápur ... ... | Muddebihál and Bágalkot ... | 2nd November 1887... | 9th November 1887. | |
| *Sind.* | | | | |
| Shikárpur ... | In 4 tálukas ... ... ... | 2nd November 1887... | 16th November 1887. | |
| Do. ... | Labdarya ... ... ... | 11th January 1888 ... | 2nd February 1888. | |
| Hyderabad ... | In few tálukas ... ... ... | 4th „ „ ... | 22nd „ „ | |

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# BOMBAY PRESIDENCY,

FOR THE YEAR 1888-89.

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No. 2200 OF 1889.

FROM

BHIMBHA'I KIRPA'RA'M,
Offg. Director, Land Records and Agriculture,
Bombay;

To

JOHN NUGENT, ESQUIRE,
Chief Secretary to Government,
Revenue Department,
Bombay.

*Poona, 11th November 1889.*

SIR,

I have the honour to submit the **Sixth** Annual Report of the Department of Land Records and Agriculture for the year ending 31st October 1889.

2. During the year, three officers held the post of the Director as shown in the margin. The permanent Director, Mr. Ozanne, C. S., returned from leave on 21st November 1888. He remained in office till 2nd April last when he gave over charge to me and proceeded to Baroda to join his sub. *pro-tem.* appointment of Survey and Settlement Commissioner. Mr. W. S. Price, whose services were in July 1886 placed at the disposal of this Department under Government Resolution No. 10231, dated 19th December 1885, to take charge of the survey records and to supervise the Circle Inspectors, rejoined the Survey and Settlement Department on 25th February last, as directed in Government Resolution No. 7486, dated 12th November 1888. Mr. Strachan, Superintendent of the Hyderabad Farm, retired on pension on 13th May last.

| Name of the Officer. | From | To | Total period. |
|---|---|---|---|
| | | | Y. m. d. |
| Mr. J. W. P. Muir-Mackenzie, C.S. | 1st Nov. 1888 ... | 21st Nov. 1888 ... | 0 0 21 |
| ,, E. C. Ozanne, C.S. ... ... | 22nd Nov. 1888 ... | 2nd April 1889 ... | 0 4 11 |
| ,, Bhimbhái Kirpárám ... ... | 3rd April 1889 ... | 31st October 1889. | 0 6 28 |
| | | Total ... | 1 0 0 |

3. Mr. Ozanne visited the Bhadgaon Farm in December. In January he made a tour in the Bhimthadi and Indápur tálukas of the Poona district for the purpose of acquainting himself with the cultivation under the new canals and ascertaining the reasons why full use is not made of irrigational facilities now available. On the 31st January he went to Bombay to confer with the Honourable Mr. Richey on the subject of the establishment of veterinary dispensaries in the Presidency. He visited the Bhadgaon Farm a second time in February. From Bhadgaon he proceeded to Amraoti under Government order No. 7980, dated 29th November last, to discuss with the Commissioner, Hyderabad Assigned Districts, the question of adopting measures to improve Berár cotton. He was present at the Kolhápur and Southern Marátha Country Cattle and Agricultural Show held at Chinchli in February, and visited Dhárwár and Bijápur to arrange for the transfer of Mr. Price's work. He paid a third visit to the Bhadgaon Farm in March. In April and May I visited at different times Bombay, Surat, Nadiád and other places in Gujarát to carry out the orders of Government relating to the establishment of veterinary dispensaries and to collect information on certain matters, *i.e.*, production and consumption of cotton, cultivation of remunerative products, &c., about which references had been received from the Government of India. I inspected the Nadiád Farm on the 27th May last. During my tour I took part, at the request of the Bombay Relief Committee, in the work of affording relief to the sufferers from the great Surat fire of April 1889.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

4. No new district has been transferred, as was originally contemplated, to this Department on the completion of the survey operations, owing to the non-settlement of the question raised by the Finance Committee in 1887. Mr. Muir-Mackenzie, C.S., who had visited in May 1888 the Ratnágirí district, which, on account of its want of kulkarnis, due chiefly to the khoti tenures, urgently needed a strong and efficient village establishment, submitted in March 1889 for the consideration of the Revenue authorities an elaborate and complete scheme, embodying the result of his long deliberation and discussion with the district officers on the best method of preserving the Survey Record prepared at great cost to Government.

5. Mr. Price's transfer has deprived the Collectors of Dhárwár and Bijápur of the valuable help of an Assistant, expert in technical matters, and necessarily weakened the chain of close supervision over the field work of a number of men scattered over the two districts. The Circle Inspectors are part and parcel of the revenue establishment, and unless their work is systematically tested and closely supervised by the Mámlatdárs, it is feared that much of the good work done during the last three years will be undone. I have received no notes of the test taken by the sub-divisional officers as directed in Government Resolution No. 2825, dated 13th April 1889, Revenue Department. On this point I beg to refer to paragraph 6 of Government Resolution No. 2557, dated 24th March 1884, Revenue Department, and to subjoin extracts from the letters of the Collectors of Dhárwár and Bijápur:—

> "The Assistant and Deputy Collectors in this district say that they inspected the work of the Circle Inspectors in their respective charges during the last travelling season, but that they have kept no regular record of the same. They will be desired in future to keep proper notes."—(Dhárwár Collector's No. 5035, dated 9th October 1889.)

> "I took charge of the special officer Mr. Price's daftar on the 14th March, a qualified Circle Inspector being attached to my office to carry out the extra work entailed there. The daftars of seven Circle Inspectors were examined during the rest of the Collector's tour. It became necessary to instruct the Assistant and Deputy Collectors to consider it in future to be a part of their duty to take tests of Circle Inspectors' work. Mr. Drew carried out these instructions with much activity, and is the only officer who has referred to the subject in detail in his Administration Report."—(Bijápur Collector's No. 360 Ag., dated 27th August 1889.)

The proposals made by Mr. Baines, C. S., on the subject of the supervision to be exercised by the Mámlatdárs and other officers over the Circle Inspectors' work will, if sanctioned by Government, secure that much desired object. (*Vide* correspondence ending with Government Resolution No. 8287, dated 3rd December 1887, Revenue Department.) A separate report has been submitted to Government on the subject.

6. The duties of this Department are confined to inspection and advice in technical matters. Inspection reports on the character of the work done by the district staff, memoranda of cases showing the failure of the village officers to carry out the orders issued by the Collectors on the subject of crop and boundary-mark inspections, lists of discrepancies and errors found in the compilation of statistics, and remarks on the returns and diaries of the district staff—these are submitted from time to time to the Collectors, who pass the requisite orders thereon. Thus the Director, without exercising independent authority or interfering with the responsibility of the district officers, assists the Collectors in controlling a special class of subordinate officials who, on account of the technical nature of the work, *i.e.*, field survey, correction of maps, settlement practices, intricacies of forms, &c., are apt to go wrong and depart from uniformity. That the Collectors of Dhárwár and Bijápur appreciate and welcome the criticisms of this Department is proved by their remarks on the work of the district staff. In no single case was there any cause for friction between the Revenue and Agricultural Departments.

7. The following tables exhibit the work of the circle inspecting staff and the supervision exercised over them by the officers of the Agricultural Department:—

## A.—Annual Inspection (November to February) by Circle Inspectors.

| District. | | Crop Inspection. | | | | | | | Waste Inspection. | | | | | Boundary-mark Inspection. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total number and area of occupied Survey Numbers in inspected villages. | | Total number and area of inspected Survey Numbers. | | Number in which entry in Village Form III. | | | Number of Waste Numbers other than Forest of inspected villages. | Total number and area of inspected Waste Numbers. | | Number in which unauthorized cultivation or other encroachment detected. | | Number of Marks inspected. | | Number of Marks found in disrepair. | | | Marks in repair shown as in disrepair. |
| | | No. | Area. | No. | Area. | Found correct. | Corrected. | Found blank and filled in. | | No. | Area. | Reported by Village Officers. | Not reported by Village Officers. | In Occupied Numbers. | In Waste Numbers. | Shown in Village Form III as in disrepair. | Not shown in Village Form III. | Shown as in repair. | |
| 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | | | Acres. | | Acres. | | | | | | Acres. | | | | | | | | |
| Dhárwár | 1888-89. | 156,493 | 1,862,290 | 11,865<br>7·58 | 102,270<br>5·49 | 4,252<br>35·84 | 5,078<br>42·80 | 2,535<br>21·36 | 8,303 | 2,410<br>29·02 | 21,572 | 2 | 12 | 143,242 | 38,591 | 2,213<br>8·79 | 14,482<br>57·52 | 8,484<br>33·69 | 405 |
| | 1887-88. | 151,412 | 1,852,622 | 11,970<br>7·90 | 110,156<br>5·94 | 3,704<br>30·94 | 5,067<br>42·33 | 3,199<br>26·73 | 9,137 | 2,579<br>28·22 | 24,937 | 5 | 14 | 153,089 | 41,128 | 2,168 | 25,932<br>93·50 | 5,279 | |
| Bijápur ... | 1888-89. | 157,290 | 2,550,936 | 16,320<br>10·37 | 229,552<br>8·99 | 6,257<br>38·34 | 6,738<br>41·29 | 3,325<br>20·37 | 8,609 | 2,694<br>31·29 | 38,555 | 5 | 13 | 180,211 | 33,971 | 10,536<br>24·74 | 23,316<br>54·76 | 8,731<br>20·50 | 2,708 |
| | 1887-88. | 159,656 | 2,678,824 | 17,512<br>10·96 | 244,211<br>9·11 | 5,052<br>28·85 | 7,010<br>40·03 | 5,450<br>31·12 | 10,452 | 2,777<br>26·57 | 45,056 | 4 | 26 | 197,775 | 36,597 | 8,136 | 39,520<br>85·45 | 8,285 | |

The inspection work over the occupied and waste land together was as shown below :—

| District. | 1888-89. | | 1887-88. | | Decrease. | |
|---|---|---|---|---|---|---|
| | No. | Area. | No. | Area. | No. | Area. |
| | | Acres. | | Acres. | | Acres. |
| Dhárwár ... ... | 14,275 | 123,842 | 14,549 | 135,093 | 274<br>1·88 | 11,251<br>8·32 |
| Bijápur... ... ... | 19,014 | 268,107 | 20,289 | 289,267 | 1,275<br>6·28 | 21,160<br>7·32 |
| Total ... | 33,289 | 391,949 | 34,838 | 424,360 | 1,549<br>4·44 | 32,411<br>7·63 |

Compared with the last year, the inspection work shows, on the whole, a decrease of 274 survey numbers and 11,251 acres in area in Dhárwár, and 1,275 survey numbers and 21,160 acres in area in Bijápur. The average decrease is 4·44 per cent. It is due to the following causes :—

(1) Reduction by a fortnight of the period allowed for inspection in Bijápur and by 10 days in Dhárwár for the purpose of recording on the village maps the corrections necessitated by the complete boundary-mark inspection.

(2) Deficiency in the full complement of hands due to some of the vacancies not having been filled up in view of reductions anticipated in the re-organization of the Department.

(3) Employment in Bijápur of some of the Circle Inspectors during the early part of the inspection period on the work of compiling statistics required by Mr. A. F. Woodburn, C.S., the officer deputed on special duty in connection with the Deccan Agriculturists' Relief Act.

The inspection work performed by the Circle Inspectors, who numbered 37 in Dhárwár and 40 in Bijápur, amounts to 386 numbers per man in Dhárwár, and 475 in Bijápur, or, allowing 90 working days in Dhárwár and 85 in Bijápur[1], 4·3 numbers per diem in Dhárwár and 5·6 in Bijápur, *i.e.*, nearly the same as last year. According to the special returns obtained from the District Inspectors, the

[1] Inspection period (November to February) = 120 days — Sundays and holidays 20 days = 100 — 10 days for map correction in Dhárwár and 15 days in Bijápur = 90 days in Dhárwár and 85 days in Bijápur.

number of days on which the crop inspection work was actually done amounts to 60 in the case of Dhárwár and 65 in the case of Bijápur. Thus the correct daily rate comes to $6\frac{1}{2}$ per man in Dhárwár and $7\frac{1}{3}$ in Bijápur, or nearly equal to the standard prescribed by the rules. As regards waste land, the Circle Inspectors' test of 29 per cent. in Dhárwár and 31 in Bijápur is more than the fixed percentage (25 per cent.) which is deemed sufficient by Mr. Ozanne and by the Revenue authorities for jamábandi purposes. The boundary-mark inspection shows a decrease of 6 per cent. in Dhárwár and 9 per cent. in Bijápur, which is due to the reasons given above.

8. It is worthy of note that appreciable improvement is each year visible in the work of the village officers who are the chief recorders of statistics for each field under different heads. Improvement in the quantity and quality of the Kulkarni's inspection means in the long run a saving in the cost of supervising establishment. The absence of a Kulkarni from his village at the time of inspection not only deprives him of the opportunity of learning work under the guidance of the Circle Inspector, but seriously interferes with the Circle Inspector's programme, particularly in cases in which the requisite village papers are taken away by the Kulkarni. In many cases, the Circle Inspectors, when called upon to explain the causes of their short work, defended themselves on the ground that much of their time was wasted owing to the absence of the Kulkarni with the village papers. With a view to remedy the evil complained of, the Collectors of Dhárwár and Bijápur were, at the request of this Department, good enough to pass stringent orders for the guidance of the village and táluka officers. The principal provisions of the rules are:—

1. That the Kulkarnis should do the crop and boundary-mark inspection concurrently, and should commence it punctually on 1st November.
2. That each Circle Inspector should submit to the Mámlatdár before the end of October a programme of his tour, showing on what days he will be at each village of his circle.
3. That the Kulkarni should be present at the time of the Circle Inspector's visit, unless he is called away for jamábandi or other urgent work, in which case he should leave, at the village chávdi, village Form No. 3 and the map for the use of the Circle Inspector.
4. That the Mámlatdárs should not detain the Kulkarnis at the head-quarters for the jamábandi work longer than a week or ten days, and should keep a statement showing the dates between which the jamábandi papers of each village were prepared, so that the Kulkarnis may not find excuse for absence from their villages except on the dates in the statement.

The effect of the rules has been satisfactory. As compared with last year, the number of the Kulkarnis who were absent with the village papers at the time of the Circle Inspector's visit fell from 51 to 21 in Bijápur and from 32 to 29 in Dhárwár; the number of the Kulkarnis' entries found correct by the Circle Inspectors shows an increase of 9 per cent. in Bijápur and of 5 per cent. in Dhárwár; the percentage of blank entries in village Form No. 3 fell from 31 to 20 per cent. in Bijápur and from 27 to 21 per cent. in Dhárwár.

**B.—Complete Boundary-mark Inspection—(March to May).**

| District. | Number of Villages in which complete Boundary-mark Inspection was done. | First Inspection. | | | | Second Inspection. | | | | | | Second Inspection remaining to be done. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number of Survey Numbers and Boundary Marks inspected. | | Number of Boundary Marks found out of repair. | | Number of Survey Numbers re-inspected. | Number of Boundary Marks found in repair. | Number of Marks fixed by measurement. | Number of encroachment cases detected. | Number of Boundary Marks remaining to be repaired at the end of the 2nd Inspection. | | | |
| | | Number of Survey Numbers. | Number of Boundary Marks. | Number of Survey Numbers. | Number of Boundary Marks. | | | | | Number of Survey Numbers. | Number of Boundary Marks. | Number of Survey Numbers. | Number of Boundary Marks. |
| Dhárwár ... | 170 | 13,660 | 81,679 | 6,979 | 18,056<br>22·10 | 6,002 | 5,744<br>39·80 | 4,659 | 292 | 3,673 | 8,685<br>60·20 | 977 | 3,627 |
| Bijápur ... | 268 | 17,116 | 96,825 | 8,856 | 23,262<br>24·02 | 8,031 | 4,235<br>20·39 | 1,796 | 81 | 6,333 | 16,536<br>79·61 | 825 | 2,491 |

9. Mr. Muir-Mackenzie clearly showed in the last year's report (paragraph 7) that complete boundary-mark inspection could not be continued on the then existing basis, but that it should be entered upon as a preliminary to the next revision settlement in each group of villages as it fell in for revision. He also pointed out that Rule 104 of the rules under the Land Revenue Code was not workable without some modifications even in districts equipped with Circle Inspector Staff. The general question as to what boundary marks should be periodically inspected and kept in good order, is still under the consideration of Government. In view of these circumstances, it was thought desirable to give up the last year's plan of concentrating all the Circle Inspectors in one táluka and to undertake with the concurrence of the Collectors such inspection as was needed for revenue purposes. The Circle Inspectors were accordingly employed in their respective circles on inspection of those boundary marks for the repair of which Government is responsible. The following marks were selected for inspection :—

1. Those between waste numbers and village sites and roads.
2. Those between occupied numbers and village sites and roads.
3. Those between waste numbers.
4. Those between occupied numbers and waste numbers.

Of the three months of the inspection period (March-May) the last month was devoted to the re-inspection of the survey numbers inspected during the first two months, and the fixing by measurement of the positions of the marks found wanting in fields. The work of repairing the boundary marks found in disrepair by the Circle Inspectors was done by the village officers under the supervision of the Mámlatdárs.

10. The change of system precludes detailed comparison with the last year's work. 34 Circle Inspectors in Dhárwár and 38 in Bijápur were at work. The inspection work, as calculated on the period actually devoted to complete Boundary-Mark 1st Inspection, which amounted to 30 days in Dhárwár and 26 in Bijápur, gives a daily rate of 13 survey numbers and 80 boundary marks per man in Dhárwár and 17 survey numbers and 98 boundary marks in Bijápur. This rate appears a fair one. During the second inspection, 4,659 marks in Dhárwár and 1,796 in Bijápur were fixed by measurement, and 292 encroachment cases in Dhárwár and 81 in Bijápur were brought to light. Of the total number of marks examined, 18,056 marks in Dhárwár and 23,262 marks in Bijápur were found in disrepair. Of the marks re-inspected only 5,744 or 39·80 per cent. marks in Dhárwár and 4,235 or 20·39 per cent. in Bijápur were found in repair, while 8,685 or 60·20 per cent. marks in Dhárwár and 16,536 or 79·61 per cent. marks in Bijápur were not repaired. As regards the large number of the boundary marks found out of repair at the second inspection in Bijápur, the Collector, Mr. Ebden, remarks as follows :—

"The Mámlatdárs appear to have done nothing towards carrying out the repairs."

**C.—Check Census of Population and Live Stock.**

| Villages with Population. | Dha'rwa'r. | | | | | | Bija'pur. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Villages. | Total Population. | Total number of Entries. | Number of Entries checked. | Number of Entries corrected. | Number of Items corrected. | Number of Villages. | Total Population. | Total number of Entries. | Total number of Entries checked | Number of Entries corrected. | Number of Items corrected. |
| Under 500... ... ... | 529 | 133,413 | 27,159 | 26,857 | 6,623 | 10,277 | 538 | 142,180 | 29,558 | 29,551 | 7,631 | 13,379 |
| Over 500 and below 1,000 ... ... ... | 252 | 179,199 | 34,701 | 18,537 | 4,578 | 8,049 | 216 | 150,126 | 30,357 | 16,469 | 4,788 | 9,400 |
| Over 1,000... ... ... | 172 | 392,257 | 74,191 | 18,394 | 4,279 | 7,289 | 146 | 340,675 | 72,750 | 19,827 | 5,633 | 10,310 |
| Total ... | 953 | 704,869 | 136,051 | 63,788 | 15,480 | 25,615 | 900 | 632,981 | 132,665 | 65,847 | 18,052 | 33,089 |
| | | | | 47 | | | | | | 49 | | |

11. The Circle Inspectors' test extended to 47 per cent. entries in Dhárwár and 49 per cent. in Bijápur, or nearly one-half of the total number of the entries were checked. The work done is up to the prescribed standard. A new column

showing 'the number of the entries corrected' has been added, with a view to indicate how far the test has been superficial and how far real. Of the total number of the entries checked by the Circle Inspectors, 76 per cent. in Dhárwár and 73 in Bijápur were free from errors.

**D.—Statement showing the measurement Work done by the Circle Inspectors.**

| No. | Classes of Cases. | Dha'rwa'r. | | | | Bija'pur. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Arrears on 31st July 1888. | New cases. | Disposed of. | Arrears on 31st July 1889. | Arrears on 31st July 1888. | New cases. | Disposed of. | Arrears on 31st July 1889. |
| 1 | Partitions of land under decree of Court ... | 3 | 49 | 45 | 7 | 1 | 11 | 9 | 3 |
| 2 | Sub-divisions on application of occupants duly sanctioned ... ... ... | 12 | 50 | 40 | 22 | 3 | 5 | 5 | 3 |
| 3 | Disputes necessitating remeasurement of fields ... ... ... ... | 36 | 50 | 54 | 32 | 17 | 36 | 35 | 18 |
| 4 | Disputes requiring fixing of marks by the field books ... ... ... | 121 | 262 | 207 | 176 | 52 | 208 | 150 | 110 |
| 5 | Encroachments ... ... ... | 116 | 232 | 216 | 132 | 57 | 206 | 190 | 73 |
| 6 | Measurement of alterations caused by alluvion and diluvion .. ... ... | 41 | 99 | 95 | 45 | 25 | 65 | 58 | 32 |
| 7 | Measurement of land required for public purposes— | | | | | | | | |
| | (a) Extramural burial grounds ... | 50 | 77 | 110 | 17 | 1 | 13 | 7 | 7 |
| | (b) Tanks ... ... ... | 18 | 22 | 27 | 13 | ... | ... | ... | ... |
| | (c) Roads ... ... ... | 20 | 25 | 28 | 17 | 6 | 9 | 14 | 1 |
| | (d) Dharmashálás and other public buildings ... ... ... | 2 | 10 | 5 | 7 | 1 | 3 | 4 | ... |
| 8 | Measurement of land for building sites ... | 56 | 116 | 119 | 53 | 30 | 194 | 185 | 39 |
| 9 | Reclassification of survey numbers ... | 4 | 2 | 6 | ... | ... | 2 | 1 | 1 |
| 10 | Miscellaneous ... ... ... | 85 | 289 | 263 | 111 | 56 | 433 | 371 | 118 |
| | Total ... | 564 | 1,283 | 1,215 | 632 | 249 | 1,185 | 1,029 | 405 |
| | Non-measurement cases— | | | | | | | | |
| | Prescribed by the Rules ... ... | 335 | 3,139 | 2,910 | 564 | 51 | 405 | 334 | 122 |
| | Not prescribed by the Rules ... | 29 | 255 | 244 | 40 | 11 | 43 | 46 | 8 |
| | Total ... | 364 | 3,394 | 3,154 | 604 | 62 | 448 | 380 | 130 |
| | Grand Total ... | 928 | 4,677 | 4,369 | 1,236 | 311 | 1,633 | 1,409 | 535 |

12. Measurement work (Nos. 1 to 10) increased 27 per cent. in Dhárwár and 98 per cent. in Bijápur; the non-measurement work also shows an increase of 23 per cent. in Bijápur and 53 per cent. in Dhárwár. Except classes 3, 7, 8 and 9 in Dhárwár and class 2 in Bijápur, which show a decrease, the increase of work is general, and marked in classes 1, 2, 4 and 10 in Dhárwár and 4, 5, 8 and 10 in Bijápur. The increase under class 5 is due to the detection of encroachments during the complete boundary-mark inspection which was chiefly confined to village sites, roads and waste numbers. The number of cases disposed of in Dhárwár was 4,369 against 2,914 in last year, or 50 per cent. more, and in Bijápur the number of cases disposed of was 1,409 against 851, or an increase of 65 per cent. The percentage of arrears on the total number of cases for disposal was no higher than last year in Bijápur and actually less by 2 in Dhárwár. The reports on the work done in September and October (which are assigned for clearing off arrears) show that nearly 60 per cent. of the arrears at the end of July has been cleared.

13. During both the crop and complete boundary-mark inspection periods the number of days on which inspection work was actually done is, as noted above (paragraphs 7 and 10), smaller than the number of days available for inspection. The special statements received show that out of 90 working days of crop-inspection period and 50 working days of complete boundary-mark inspection in Dhárwár nearly $\frac{1}{7}$th part was lost to inspection work on account of sickness and other leave. In Bijápur, out of 85 working days during crop-inspection period and 50 during complete boundary-mark inspection, 19 and 8 days respectively were in a similar manner wasted. A rigid enforcement of the leave rules passed by the Collectors is necessary to effect the desired improvement in this direction.

E.—District and Assistant District Inspectors' Work.

| District. | Crop Inspection. | | | | Waste Inspection. | | | | Boundary-mark Inspection. | | | Correspondence. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total number of occupied Survey Numbers inspected by Circle Inspectors. | Number of occupied Survey Numbers tested by District and Assistant District Inspectors. | | | Total number of Waste Numbers inspected by Circle Inspectors. | Number of Waste Numbers tested by District and Assistant District Inspectors. | | | Number of Marks tested by District and Assistant District Inspectors. | | | | |
| | | Total. | Satisfactory. | Not satisfactory. | | Total. | Satisfactory. | Not satisfactory. | Total. | Satisfactory. | Not satisfactory. | Inward Numbers. | Outward Numbers. |
| Dhárwár ... | 11,865 | 305 | 128 | 177 | 2,410 | 65 | 35 | 30 | 5,405 | 4,918 | 487 | 3,813 | 3,356 |
| Bijápur ... | 16,320 | 334 | 183 | 151 | 2,694 | 64 | 63 | 1 | 5,075 | 4,363 | 712 | 2,342 | 2,856 |

14. The number of fields inspected shows an increase of 46 per cent. in Dhárwár and 142 per cent. in Bijápur. As compared with Bijápur, the test work in Dhárwár exhibits a decrease of 8 per cent., which is due to the fact that the District Inspector of Dhárwár was, in addition to his own duty, in charge of Mr. Price's office during that officer's deputation on special duty from 10th to 21st January last as arbitrator in a boundary dispute between Hira Jágirdár and the Sávantvádi State under appointment by Government.

F.—Head-quarter Office Work.

| District. | Number of cases received necessitating corrections in Survey Records. | Number of A'kárbands, Maps, and Field Books corrected. | Number of extracts from Field Books sent to Circle Inspectors. | Number of extracts from Survey Books supplied to Revenue Officers and Petitioners. | Number of Maps supplied to Village Officers. | Correspondence. | |
|---|---|---|---|---|---|---|---|
| | | | | | | Inward Nos. | Outward Nos. |
| Dhárwár ... | 67 | 2,277 | 873 | 43 | 158 | 2,386 | 326 |
| Bijápur ... | 200 | 1,410 | 229 | 6 | 250 | 1,752 | 220 |

15. The current work of these offices has been steadily increasing. The large number of the maps and ákárbands corrected (column 3) in Dhárwár is due to corrections necessitated by land taken up for the Medleri and Tadkod tanks. The work of dividing the survey records at the head-quarters into two batches as a protection against fire (last year's report, paragraph 12) was finished during the year. In addition to this the work of making copies of certain documents to complete the record in both the batches was taken in hand in Bijápur, and 1,111 extracts were made from the classers' books.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

16. The Statistical Atlas[1] was approved by Government in November last and 1,000 copies thereof were printed at the Government Central Press for distribution among Government officers and for sale to the public. Copies have been kept for sale (price Rs. 7-8 per copy) with the Curator, Government Central Book Depôt, Bombay.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

17. No special measures were needed under Chapter VI of the Bombay Famine Relief Code.

[1] It contains information, as required by section 17 of the Bombay Famine Relief Code, regarding areas liable to famine, the causes which make them so liable, their accessibility or otherwise for relief purposes, the economic condition of the population of such areas, and a rough forecast of the maximum number of persons within each district likely to require employment on relief works in a year of famine from extreme drought or other causes, and exhibits a complete set of District Maps prepared by the Photozincographic Department, Poona, with remarkable accuracy and clearness.

## IV.—MEASURES OF PROTECTION, INCLUDING

(1) *Fodder Reserves and Arboriculture.*
(2) *Extension of Communications.*
(3) *Irrigation.*

### (1) *Fodder Reserves and Arboriculture.*

18. Only one application was received under Government Resolution No. 6282 dated 5th August 1884. In the Bhimthadi Táluka of the Poona district, a field of 17¼ acres, assessed at Rs. 18, has had the greater part of it rendered totally unproductive on account of a salt efflorescence produced by percolation from the canal. The occupant has been permitted to convert the injured portion into a bábhul grove on the remission of the three-fourths of the assessment.

As regards the formation of fuel and fodder reserves adjacent to railway stations, I beg to quote from Mr. Ozanne's memorandum, which gives some idea as to what is being done in this direction :—

"In reporting on the references from the Government of India, the Conservators of Forests have claimed that the Forest Reserves in this Presidency are practically 'Fuel and Fodder Reserves' which will have the effect desired of providing grass and grazing in times of drought when the ordinary pasture grounds fail, and of maintaining a supply of fuel which with the extension of cultivation would not be otherwise available. Again, considerable efforts have been made to extend the areas of bábhul plantations in suitable spots, near villages and the like. Concessions have been made by Government to applicants willing to devote their land to such purpose or to take up new land for plantations. Experiments have been set on foot in Sind and in Khándesh on the Government Experimental Farms, designed to show the way to a profitable utilization of bábhul growing on cultivable and rent-paying land. I think that the extension of such plantations is most desirable. Bábhul is, as I have constantly urged, a valuable tree, provided its growth is confined to set areas, and provided no attempt is made by Revenue officers to urge the people to grow it on the borders of fields, cultivated with dry-crop rabi crops, or by Public Works Department officers on road-sides or canals in the immediate vicinity of such cultivation. The greater the concessions sanctioned by Government the greater will be the progress in this direction.

"2. The Government of India now draws attention to the creation of fuel and fodder reserves, especially the former, in the vicinity of newly projected lines of railway. A great opportunity has been lost in the black-soil plains between Hubli and Gadag on the Southern Marátha Railway Line. There the soil is especially suited for bábhul, and it would have paid the Company or Government to have bought up some of the land bordering on the Beni Hala Nála. This nála is always shifting its course. The soil is very saline, and in places is almost uncultivable on this account. It would grow luxuriant bábhul, and the effect would have been an improvement of the land for cultivation. I on several occasions urged the acquisition of some of this land to the officers of the Company, but it was not easy for the Company to make such a venture. It may not be too late to form a small fuel reserve in this locality, but the land will have to be purchased, and it will not be cheap."

By Government Resolution No. 715, dated 28th January 1889, Revenue Department, this Department has been directed to prospect lands, as occasion offers, for fuel reserves and to make any proposals which may appear feasible and likely to give a good return.

### (3) *Irrigation.*

19. During the year under report two references regarding canal irrigation were received for opinion by this Department. In Government Resolution No. 12 W.I.—269 of 6th February 1888, a detailed report was asked from the Irrigation Department with a view to the subject of reduction of rates being reconsidered, as the reduction, which had been in force for five years, appeared to have resulted only in a considerable loss of revenue to the State without a corresponding or proportionately larger benefit to the people. The Agricultural Department has had no opportunity of making special inquiry into this important subject. It cannot, however, be doubted that (I) character and distribution of rainfall, (II) want of capital, and (III) want of manure are the most important factors which regulate the demand for canal irrigation. The first cause needs no remarks. Under the head of 'capital' the important point other than the initial cost of preparing the land for irrigated crops is the larger expenditure in labour which is entailed by irrigation in order to keep land clean and free from weeds. On the Khándesh Farm, experience has shown that land which has been irrigated for two or three

years in succession is so full of weeds that the after-cropping is most unremunerative, unless great expenditure on cleaning is incurred.

As regards manure, the difficulty is great. Irrigated crops trench on the temporary fertility of the soil, which must be restored either by manure or rest. Irrigation cannot, therefore, be carried beyond the limits which the supply of available manure fixes. It is suggested that the people should be taught the use of green manures, and it is hinted that the idea is a new one to them. It is not new. Tág or Bombay hemp is fully used as a green manure in garden cultivation, but its value as a preparatory crop for wheat and jowári either irrigated or dry is, to say the least, doubtful. It may be that the use of green manures can be extended profitably, but it is erroneous to suppose that they are not known. Besides these, saline efflorescence also helps to explain the apparent apathy and want of enterprize on the part of cultivators. The deposits of salt in the lower layers of the black cotton soils in the Deccan and Southern Marátha Country are very large, and the frequent result of irrigation is a raising to the surface soil, of salt, either common salt, or other soda salts, in quantities which seriously diminish the fertility.

The other reference related to a proposal from the Executive Engineer, Sátára, to modify Rule 11 of the rules passed under the Act in connection with water rates on khodwa (ratoon cane) cultivation. The proposed modification was considered unnecessary. It was pointed out that ratoon cane is deserving of every encouragement. This encouragement has been given in Poona with the satisfactory result that cane is now grown continuously and profitably without replanting for several years. In one case near Mundhwa, in Poona, a field has been under cane seven years. The remedy for the difficulty experienced in Sátára is not the discouragement of khodwa, but a stricter application of existing rules respecting the charge for khodwa as a new crop.

20. A commencement was made by the Department in the important study of the practical difficulties attending extension of irrigation. The diary kept by Mr. Ozanne during his tour in Bhimthadi and Indápur of the Poona district, where irrigation is from the Níra and Mutha Canals and some irrigation tanks, will be circulated for information. This tour proved the great hindrance due to saline efflorescence, and it was amply evident that the subject is one which cannot be easily dealt with by the Revenue Department, as it is one which requires careful study and experiment.

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

### *A.—Experimental Farms.*

#### Bhadgaon Farm.

21. The annual report was distributed in July. Mr. Ozanne visited the farm thrice—in December, February and March, and laid down the cropping programme on the principle that, except a few acres for experiments, the Bhadgaon land should be applied to stock farming (*vide* Government Resolution No. 763, dated 29th January 1889, Revenue Department).

The rainfall of the season was scanty and very insufficient for rabi crops, the total fall being 18 against the average of 34 inches. In the non-experimental area, crops were raised on 480 acres at a cost of Rs. 3,953, and the value of the produce was Rs. 6,829. The cost of cultivation including assessment was Rs. 9-9-0 per acre against Rs. 11-5-0, and the outturn was Rs. 14-3-0 against Rs. 15-8-0. The net profit per acre, in spite of the bad season, was Rs. 4-10-0 against Rs. 4-3-0 in the preceding year. Only a small area (3 acres 25 gunthás) was devoted to experimental purposes, as most of the area assigned to experiments was included in the previous year in the portion sold to Mr. Khimji Jiva, but since recovered.

#### Crops.

*Cotton.*—The average yield of *Varádi*, which had almost five-sixths of the total area, almost doubled, while that of *Dhárwádi* almost halved, owing to its having been sown on light land where other varieties would have hardly yielded anything. The different varieties[1] of the new American cotton yielded better, and thus gave an additional support to the view that American cotton requires

[1] Bruder, Allen, Louisiana, and Upland.

to become accustomed to the soil and climate before it yields good results. Curiously enough the growth of the Upland variety was stronger than even the Farm *Varádi*.

*Wheat.*—The results of the five years' experiments, besides proving that the colour and consistency in wheat are dependent upon climate, soil, &c., show that the crops from seed from the North-Western Provinces are more prolific, yield more straw to an equal amount of grain, and are weightier than *Bansi*, the common variety of the district.

*Jowári.*—*Shálu* or cold-weather jowári, which is so common in the Deccan proper, but rarely cultivated in Khándesh, was tried on the farm, and in an irrigated and manured field gave a net profit of about Rs. 8 per acre. But in the other unmanured field, which was 3½ times larger, it did not pay its cultivation charges. The result is, however, sufficiently encouraging.

The *pickling* experiments made to test the efficacy or otherwise of carbolic acid, copper sulphate and lime, and urine as pickles proved negative in their results, as there was no smut either on the farm or in its neighbourhood.

*Arrowroot* was cultivated to the extent of one acre, which gave 900 lbs. of starch at a cost of 2¼ annas per pound. The cost is liable to reduction if the crop becomes a regular one. The net profit per acre amounts to Rs. 92 at the ordinary rate of 4 annas per pound.

*Bisulphide of Carbon Experiments.*—As far as the result of a single experiment goes, the chemical seems to be a good preservative against the attacks of weevils. It does no harm to grain as regards its colour, smell and cooking properties.

*Live Stock.*—The live stock was unusually healthy, there being only 3 deaths. Nine pairs of plough bullocks at a cost of Rs. 750 were newly bought to replace the old worn-out stock. Sheep do not thrive on the farm. Besides this, in the neighbourhood goat's flesh is preferred to sheep mutton. With a view to minimise loss incidental to the outbreak of an epidemic in the farm flock, the farm sheep, which did neither thrive nor command a ready sale in the neighbourhood, was disposed of, and in its place a flock of goats, which are preferred to sheep, numbering in all 56 head, was purchased.

*Machinery.*—The farm crop of arrowroot was pulped by Mr. Gogte's arrowroot machine. It consists of a wooden wheel with a perforated tin sheet revolving in a wooden frame. The tubers are pressed against the tin sheet, and in an hour about 86 lbs. of tubers are pulped. Mr. G. Walshe's yoke is a combination of wood, iron and leather, and requires constant care and attention to keep it in nice working order. It claims to act as a preventive to neck galls in bullocks. It has worked satisfactorily.

The farm steadings were either repaired or rebuilt at a cost of Rs. 3,050 under the supervision of the Superintendent, and a granary is being built by the Public Works Agency the cost of which is estimated at Rs. 4,000.

**The Sind Farm (Hyderabad).**

22. The rainfall though below the average was seasonable, and would have yielded better results but for a low and short inundation. In the non-experimental area (55 acres) the crops yielded Rs. 2,703 at a cost of Rs. 2,032, or a net profit of Rs. 12½ per acre. The experimental area comprising 12 acres yielded Rs. 321 against an expenditure of Rs. 383, or a net loss of Rs. 5¼ per acre.

*Lucerne and Guinea grass.*—Lucerne is the best paying crop on the farm. It has passed the experimental stage, and is now grown as a regular crop on the farm. It is satisfactory to note that imitation as regards this crop has begun. Both Messrs. Strachan and Khambatta hold that weeding in the hot season is harmful to lucerne. This important point can only be settled by a series of experiments. The cultivation of guinea grass was not remunerative. Its yield (6 tons per acre) was far below the average. It is hardier than lucerne, and has the virtue of increasing the flow of milk in ewes and milch cattle. People have some prejudice against its use, but it will wear out after some time.

Though *Wheat* cultivated on the Lois Weedon system has proved its superiority over the rotation and the continuous systems on the Bhadgaon Farm,

this system of cultivation has shown no superior results on the Hyderabad Farm where wheat in rotation has all along occupied the first place. In respect to *Cotton* the bazár seed again beat the farm selected seed, but the yield was so poor that no conclusions could be drawn. The experiments made to test how far the selection of the *Bájri* seed from the different parts of the spike improves the outturn, show that the results though varying are in favour of selection from the lower end of the spike. The *pickling* experiment was rendered negative in its result by the absence of smut on the farm.

Under the recent orders of Government the farm has since 1st August 1889 been handed over to the management of the District Local Board, who have agreed to maintain it for the purpose of teaching and spreading the cultivation of fruit trees, vegetables and fodder crops, and to return it when it is required by the Agricultural Department as an experimental station.

**Poona Farm.**

23. The re-transfer of the Kirkee Cantonment land to the Military Department to provide for a rifle range has reduced the farm area to 66 acres. The farm is being cultivated in such a way as to become useful in imparting practical instruction to the students of the Agricultural Class of the College of Science. Much of the farm land is uneven and intersected with water channels. Attention is being directed to remove these defects. Except the *Nilva* variety of jowári, the crops raised on the farm were the staples of the locality, and occupied about 19 acres. The cost of cultivation amounted to Rs. 490 and the value of yield to Rs. 644. This gives a net profit of Rs. 8 per acre. The silo filled last year was opened in March last and the silage was fed to the farm cattle during the hot season. (For details see paragraph 37.)

Three Aden cows and a heifer were purchased at a cost of Rs. 187. The present strength of the milch cattle on the farm is shown in the margin. The object of keeping milch cattle on the Poona Farm is (I) to keep a record of the milking qualities of each breed, (II) to try to cross one breed with another, to improve milking qualities, and (III) to study the best system of feeding for milk production.

| Kinds. | Cows. | Steers. | Heifers. | She-buffaloes. | Total. |
|---|---|---|---|---|---|
| Gir breed .. | 2 | 1 | 1 | .. | 4 |
| Aden breed .. | 3 | .. | 2 | .. | 5 |
| Surat breed .. | 1 | .. | .. | 2 | 3 |
| Cross breed .. | .. | 1 | 3 | .. | 4 |
| Total .. | 6 | 2 | 6 | 2 | 16 |

With the kind help of Mr. Woodrow, mango grafting has been successfully pushed on. Crown-grafting, which is much more difficult and requires greater care than side and saddle grafting, gave 50 per cent. of successful grafts and side and saddle grafting gave 75 per cent. of successful grafts. Of the 700 side and saddle grafts, 400 were tried on the Ganesh Khind Gardens and 300 on the Poona Farm. The crown-grafts (150) were confined to the Ganesh Khind Gardens.

Labourers' quarters, cattle-byres, store-room and officers' quarters were built by departmental agency at a cost of Rs. 3,000. Students' quarters are being built near the farm by the Public Works Department the cost of which is estimated at Rs. 10,000.

**Nadiád Farm.**

24. The operations on the Nadiád Farm, which is a private institution, yielded Rs. 49-4-0 per acre against an expenditure of Rs. 40-8-0, or a net profit of Rs. 8-12-0 per acre, which seems to be a fair return for an indifferent season. The manure experiments made with tobacco show that ashes and oil-cake as tobacco manures give the best results. Next come in order saltpetre, tannery refuse and goat droppings; farm-yard manure does not seem to suit tobacco so well. The interculture experiments on crops such as castor and *kothimdi*, sesamum and *tuver*, and *bájri* and *vál* were rendered useless for purposes of comparison, because the crops forming the mixtures were not also singly grown in the same way as the mixtures. With a view to make the seed depôt popular, the Committee of Management has decided to sell pure seed on credit. This seems to be a step in the right direction. The Committee have secured for the Museum a good house close to the farm.

*B.—Experiments on various Indigenous and Exotic Products.*

**1. Wheat.**

25. The distribution of selected wheat seed to the Zamindárs in Sind was continued in the Nára Valley in Thar and Párkar with the results as shown below :—

| Kind of Seed. | Number of Zamindárs to whom seed distributed. | Area sown in 1888-89. A. g. | Total Seed sown. Mds. sers. | Total Outturn. Mds. sers. | Averages per Acre. Seed sown. Sers. | Averages per Acre. Outturn. Sers. |
|---|---|---|---|---|---|---|
| 1. Selected seed newly imported during the year ... ... ... | 16 | 64 10 | 75 31 | 277 0 | 47 | 172 |
| 2. Acclimatised seed, being Government share of previous year's produce ... ... ... ... | 49 | 376 22 | 327 22 | 2,380 0 | 35 | 253 |
| Total Government Distribution ... | 65 | 440 32 | 403 13 | 2,657 0 | 36 | 241 |
| 3. Selected seed newly imported and tried at Municipal garden, Umarkot ... ... ... ... | ..... | 3 29 | 3 27 | 21 30 | 39 | 233 |
| 4. Acclimatised seed, being Zamindárs' share of previous year's produce ... ... ... ... | ..... | 2,371 0 | Not available. | | | |
| Grand Total ... | ..... | 2,815 21 | | | | |

The outturn averaged 6 maunds per acre. The acclimatised new seed gave as usual a much higher outturn, being seven-fold of the seed sown against the four-fold yield from the freshly imported seed. The result in both the cases was much better than in the preceding year. The new variety was first introduced in the year 1884-85. During the last five years the cultivation of the imported seed has extended over 2,815 acres, or $\frac{1}{8}$th of the total area (21,168 acres) cultivated with wheat in the Nára Valley. The new seed belongs to the soft white variety, and besides commanding a higher price, it ripens quicker, gives generally a better yield, and is less liable to rust. The average price at the time of harvest in the Nára Valley was Rs. 2-8-0 per maund for the Sindhi and Rs. 2-14-0 for the new kind of wheat, or 6 annas per maund higher for the selected variety. With these advantages there seems no doubt that the area of the imported seed will go on increasing. But it appears that until the means of communication are improved, much of the new wheat will not find its way to the Karáchi port. The difference between the price at Karáchi and the price at the local market is only about 4 annas per maund, while the cost of carriage to Hyderabad alone amounts to 10—12 annas per maund. The distribution of seed is made on condition that the seed given should at the harvest be returned to Government. The seed returned is used for the next year's distribution. This method of distribution has two distinct advantages. It effects a saving in Government cost and at the same time increases the area of the selected variety at a more rapid rate.

*Australian* wheats were the only foreign wheats that were tried, and they yielded better than the previous year on the Hyderabad Farm. Attempts to introduce foreign varieties of wheat have failed; while on the other hand the experiments show that the interchange of seed between various provinces is most successful.

26. There was again a fall in the exports of wheat, which may be attributed to the short harvest of the season. Appendix C compares the figures for the last ten years.

The following table shows the quantities of the Indian wheat and the countries to which they were exported during the six years ending 1888-89 :—

*Cwts. in thousands.*

| | 1883-84. | 1884-85. | 1885-86. | 1886-87. | 1887-88. | 1888-89. |
|---|---|---|---|---|---|---|
| United Kingdom... ... ... | 10,508 | 7,445 | 12,071 | 9,667 | 6,040 | 9,038 |
| Belgium ... ... ... ... | 2,593 | 1,738 | 2,661 | 2,404 | 596 | 2,478 |
| France ... ... ... ... | 3,398 | 3,312 | 2,145 | 2,803 | 2,559 | 3,131 |
| Italy ... ... ... ... | 445 | 701 | 1,218 | 5,212 | 3,074 | 1,125 |
| Egypt ... ... ... ... | 3,306 | 2,149 | 2,296 | 1,317 | 660 | 1,658 |
| Other Countries ... ... ... | 706 | 486 | 669 | 860 | 609 | 180 |
| Total ... | 20,956 | 15,831 | 21,060 | 22,263 | 13,538 | 17,610 |

### 2. Cotton.

27. In 1888-89 in the Dhárwár district the area sown with the newly imported American cotton amounted to about 700 acres. The progress is slow and has not answered the expectations. The cultivators know from their experience that the American variety is superior to the indigenous one, and that the old imported seed, which has considerably deteriorated, requires to be replaced by fresh seed. But they do not wish to incur immediate loss by sowing fresh seed which gives small yield till it is fairly acclimatised. Again, some of the cultivators allege that the seed is too hard and indigestible to be of general use as cattle food. The four varieties of New American cotton, which did not grow well in the previous year, were again tried on the Bhadgaon Farm in 1888-89. All of them yielded a fair crop, and the Upland variety in particular grew stronger than even the local Varádi. An acre put under pure Hinganghâti on the same farm gave 143 lbs. of seed cotton, yielding a profit of Rs. 10.

Improved Sindhi, American Upland, Bourbon, Nánkin.

The Deputy Commissioner of Thar and Párkar made experiments in the Umarkot Municipal Gardens with seeds of the marginally noted varieties obtained from the Hyderabad Experimental Farm. The details are :—

| No. | Variety of Cotton. | Quantity of seed used. Lbs. | Area in which sown. Acres. | Produce. Clean Cotton. Mds. | s. | t. | Rate per maund at which sold at Umarkot. Rs. | a. | Amount realized. Rs. | a. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Improved Sindhi ... ... | 11 | ½ | 1 | 30 | 0 | 13 | 12 | 24 | 1 |
| 2 | American ... ... ... | 5½ | ¼ | 0 | 18 | 20 | 14 | 8 | 6 | 10 |
| 3 | Bourbon ... ... ... | 11 | ½ | 0 | 17 | 0 | 14 | 8 | 6 | 6 |
| 4 | Nánkin ... ... ... | 5½ | ¼ | 0 | 10 | 67 | 12 | 0 | 3 | 4 |

*Note.*—Improved Sindhi is the crop of the selected seed of the indigenous Sindhi variety.

The crop of Improved Sindhi was estimated at 14 annas and that of the American variety at 7 annas. The Bourbon and Nánkin varieties were respectively estimated to yield 3 and 5 annas. Samples were sent to the Karáchi Chamber of Commerce, who gave the following opinion :—

> "The improved SINDHI is no better than the ordinary Sind cotton of the best class —value Rs. 18 to Rs. 18-4 per maund. NANKIN.—Although of good colour the staple is so poor as to render it valueless for spinning purposes. It might, however, be used for stuffing pillows, &c. Impossible to assign a value to it. BOURBON.—As regards staple, this is almost equal to Egyptian cotton and worth 1½ *d.* per lb. over Sind, or say Rs. 24 per maund of 84 lbs. AMERICAN is nearly equal to fine Bengal, and is worth in the market about Rs. 19 per maund."

The experiments made on the Hyderabad Farm with Bourbon cotton have shown that, on account of its low yield, Bourbon cotton does not pay well. Nánkin cotton, besides being poor in staple and yield, may harm the surrounding cotton crop of other varieties by hybridizing.

28. *Saw-gins.*—The ginning factories in Dhárwár have improved financially and it is hoped that the District Local Board will take over the management of the factories at the end of 1889-90. At present the total number of steam gin factories in the district is 15, of which 7 were opened during the last cotton season. Though they have in several places replaced bullock gins, steam gins have not yet reduced the number of hand-power gins, the initial expenditure required to open a steam gin being beyond the means of cotton dealers with limited capital.

29. *Berár Cotton.*—At the suggestion of the Government of India Mr. Ozanne visited Amraoti in February to enquire into and advise regarding the deterioration in the quality of the cotton. I make the following extract from his memorandum :—

> "The result of this enquiry was clear proof that cotton of an inferior staple was some years ago introduced, not by Government or indirectly by the action of Mr. Ashburner in 1863-64 in his fruitless endeavours to extir-

pate the indigenous cotton of Khándesh, but by private individuals. The seed came most probably from the Nizám's territories or adjoining portions of the Central Provinces in the neighbourhood of Chánda. It grew well and yielded a far larger crop than the old varieties of Jari and Bani and has gradually so spread that pure Jari and Bani cannot be obtained now. This course of events was the result of the large demand for short staple cotton for admixture—fraudulent or otherwise—and the rise in the price of short-stapled cottons, which made it less profitable to grow for staple than for quantity. I advised that immediate steps should be taken by the Berár administration to obtain a small quantity of as pure Jari and Bani as possible and to keep up the strain by careful cultivation and selection, and in this advice I was supported by the local officers including the Commissioner, Mr. Plowden. The expenditure involved was very insignificant, but I have been informed that the proposed expenditure has not been sanctioned. It is true that the local cottons of the short staple variety are showing unmistakeable signs of improvement in the better soil of the Berárs and under the good cultivation of that tract, and this improvement is very much to be encouraged. Nevertheless, Bani and Jari are such superior varieties and have shown such success in the particular soils to which they are adapted that it seemed to me a great evil if the strain is allowed to die out, as it will most inevitably do, if Government does not take some such step as that advocated. In a few years Bani and Jari will only be known by name, or will be applied to those inferior varieties still known as Bani and Jari in the Central Provinces. One good result the visit had. I was able to collect a small quantity of good Jari and Bani seed and have that carefully planted in the Khándesh Farm. There it will be preserved and improved, though there again the wise principle of improving the indigenous varieties by selection has not by any means been lost sight of."

It has been alleged that the seed of the present poor cotton came from Khándesh when Mr. Ashburner forbade its use there.

**Forecasts.**

30. The forecasts of cotton and wheat, the chief crops of commercial importance, were separately published as usual for the information of the public. The area as compared with the year 1887-88 was reported as shown below :—

| Crop and Province. | Area. | | Increase or Decrease per cent. + or — |
|---|---|---|---|
| | 1888-89. Acres. | 1887-88. Acres. | |
| *I.—Cotton.* | | | |
| British Districts ... | 2,706,918 | 2,876,871 | —5·90 |
| Native States ... ... | 2,587,923 | 2,738,655 | —5·50 |
| Total ... | 5,294,841 | 5,615,526 | —5·71 |
| *II.—Wheat.* | | | |
| British Districts ... | 2,336,776 | 2,468,738 | —5·34 |
| Native States ... ... | 633,413 | 575,788 | +10·01 |
| Total ... | 2,970,189 | 3,044,526 | —2·44 |

The area reported in the forecasts for the British Districts in 1888-89 differs from the actual area reported in the agricultural returns by only 1·86 per cent. for cotton and 1·03 per cent. for wheat. This fact shows that the forecast figures are sufficiently near the mark to be of some practicable use.

**3. Tobacco.**

31. The Honourable Ráo Bahádur Bechardás Viharidás could not sow more than one acre with the West Indian varieties of tobacco, and the seedlings where the seed was sown died in the seed beds, for want of rain.

**4. Date-Palm.**

32. Notwithstanding the complaints that the seed distributed last year was weeviled, about 575 plants have up to this time been reported to be in a

healthy condition. They have made 5 to 8 leaves and are 9 to 18 inches high. In Sholápur a few plants are 2 to 3 feet high. The seedlings have now been planted in their permanent places. This progress is considered fairly satisfactory, and there is a demand for offsets and more seed from both officers and private gentlemen. Mr. Duthie, Director, Botanical Department, Northern India, who has been entrusted with the duty of importing Egyptian date-palm seed and offsets, has been asked to supply 50 lbs. of seed and 78 offsets. Besides the seed supplied by the Director, the Conservator of Forests, Northern Circle, bought in Bombay a large quantity of Bassorah date seed and had it sown in the districts of his circle. The results were poor, except in the case of selected seeds which were sown in pots and were carefully attended to. The reports from the Násik and Sátára Divisional Officers are very encouraging. In June last one maund of Djereed seed was obtained for the Commissioner of Sind. Of all the provinces of the Presidency, Sind, which has, especially in Shikárpur, considerable area under date-palm, is most suited for the cultivation of this palm. Of the imported seed 10 seers was for a plantation at Kotri, which, the Collector of Karáchi reports, is the only place in the district specially adapted, from its rich soil, climate and abundance of river water, to the cultivation of date-palm. An equal quantity of the seed was sent to the Collector of Hyderabad to form a grove in the Economic Garden at Hyderabad.

**5. Arrowroot.**

33. In addition to Bhadgaon, as already noticed, arrowroot was grown at Dápoli and Gondal. Mr. Gogte has not increased the area under this crop. Except for a few known brands, the demand for this article in the market is limited, and it does not pay to produce this article in large quantities for sale in the open market. In Gondal it occupied 2 gunthás. The yield is reported at 580 lbs. of starch per acre. The quality is considered to be as good as that of the previous year, and in the local market it fetched 6 annas per lb.

**6. Divi-Divi.**

34. With a view to ascertain the probable yearly outturn of the Dhárwár divi-divi plantations and to assess the price quoted for Bombay divi-divi in the British markets, the right of collecting pods was farmed to Messrs. Chrystal & Co., of Hubli. The crop amounted to 69 cwts. which together with that of the previous year (21 cwts.) has been shipped to London and a part of it sold at 7*s.* 9*d.* per cwt. On the Bhadgaon Farm the divi-divi plantation has been extended along the course of the nála marking the western boundary of the farm. The crop, which amounted to about a ton and a half, has not found a purchaser. The Kánara plantation now contains 19,703 trees. It is in good condition and during the last season yielded twelve maunds of pods of which three maunds have been sent to the Divisional Forest Officer, Dhárwár.

**7. Indigo.**

35. Attempts are being made to resuscitate indigo cultivation in Gujarát, especially in the Native States of the province. Besides at Junágad in Káthiáwár, an experimental cultivation of indigo extending over 10 bighás has been made at Sádra in the Mahi Kántha Agency.

**8. Barilla.**

36. Barilla is said to reclaim lands impregnated with an excess of carbonate of soda and other salts, and with a view to test its virtue in improving salt lands it was sown on the Nadiád Farm in March 1886 (paragraph 89 of the report for 1885-86). The land was a saltish sandy loam twice stirred up and manured with cowdung and ashes. The seed, which was sown broadcast and watered every third day, took ten to eleven days for germination. The plants were occasionally watered during the four hot months, generally every tenth or fifteenth day. For two years the plants, though they throve well, neither flowered nor seeded, and were consequently, at the end of the second year, cut down to the ground. The stumps, however, without the least care and watering threw out vigorous shoots, and by the subsequent August-September, when they commenced flowering, the plants were 3 feet high. After they had seeded the plants were cut down in December. After three days the seed was separated and the plants were burnt for sajjikhár, or impure carbonate of soda. A pit, 2 feet wide at the bottom and half a foot at the mouth, was dug and internally plastered with clay. On

the iron bars laid across the mouth of the pit were placed the half-dried plants (50 lbs.) with 12 lbs. of fuel and the whole was covered on three sides by a broken earthen pot. After the plants had been burnt, the mouth of the pit was closed and re-opened after a lapse of twelve days. At the bottom of the pit about three quarters of a pound of *sajjikhár* was collected. The plants thus burnt covered a plot measuring 10 × 14 feet. No appreciable difference in the quality of the soil has been noticed, but the agricultural teacher reports that the plant tasted saltish and throve better under saltish well water in the hot dry months than under rain in the rainy season.

*C.—Ensilage.*

37. On the Poona Farm, a field of more than 4 acres was thickly sown with Nilva jowári to obtain green stuff for ensilage. The pit silo had a capacity of 4,050 cubic feet and was filled with 68,000 lbs of the jowári cut flowering at the end of September 1888. The crop was cut on the previous day and filled in on the subsequent day, thus allowing sufficient time for wilting and airing. The filling operations lasted for full fifteen days. The silo was filled a foot above the brim and the top layer was covered with a 4-inch layer of weeds. When the temperature rose to 120° F., the top was plastered with a layer of clay 2 inches thick, and the whole was weighted down by a layer of murum one foot deep, giving a weight of 200 lbs. to the square foot. The silo was opened on the 5th March, or after a period of five months, and the ensiled fodder was found to have sunk 2 feet below the brim of the pit. The stuff looked almost as nice as when first put in, and was greedily eaten by the farm cattle, including the newly purchased Aden cows that had never tasted silage before. The silage supplied green fodder to the farm cattle in the hot season when such fodder was scarce in the market.

*D.—Sugar Refineries.*

38. Messrs. Travers and Sons of London have suggested the advisability of establishing model central sugar factories on the plan of indigo and silk mills in Bengal. The examination of the suggestion by the light of the available statistics shows that as the present area under sugarcane is not large enough even to meet the local demand for *gul* or raw sugar, which is quite distinct from that of sugar, it is advisable, with a view to guard against unnecessary expenditure of Government money, to encourage private enterprise by affording all possible facilities. The Poona and Baroda sugar factories are worked on the central system and though they are equipped with the improved plant and machinery are not paying concerns. Mr. Dorabji, the proprietor of the Poona factory, mentions three chief drawbacks:—(1) that the crystallizable matter in the raw material in the Deccan is less than that found in the produce of Madras and Bengal; this is owing to the full use of poudrette as manure in growing sugarcane, (2) that the price of raw material is higher on this side than what it is in the other provinces, and (3) that at present he finds difficulty in disposing of the rum produced at the factory. The correctness of the first allegation can only be ascertained by instituting careful experiments. The drawback as regards the high price seems to be true. The question of the disposal of rum is intimately connected with the ábkári system of this Presidency. Facilities to dispose of his rum were given to Mr. Dorábji, but he does not seem to have been satisfied with them. The loss in working the Baroda factory is attributed chiefly to a short working season and to the comparatively high price at which *gul* or jaggery is locally sold. A special report on the subject has been submitted to Government in obedience to memorandum No. 5814, dated 9th August 1889.

*E.—Bone Manure.*

39. The Government of India have directed that this year's annual report should contain as far as possible information on the following points in connection with the export of bones:—(1) Sources of exports, (2) extent to which bones are collected in the mofussil, (3) treatment of bones before shipment, (4) suggestions for the utilization of bones as manure in this country, and (5) results of the experiments made in previous years. The Government of India's instructions reached this office only a fortnight ago and it has therefore not been found possible to include in this report the required information. In the first place the trade

in bones is not separately registered and consequently the sources of export cannot be traced from the Rail and Road-borne Trade Reports or from the Annual Statements of Trade and Navigation.

During the last nine years ending 1888-89 the exports from the Port of Bombay, which are mainly to the United Kingdom, have nearly quadrupled and the value has increased about five times. From this it will be seen that the exports have not only increased but have commanded better prices. The exports from Karáchi during the last six years have increased by eleven times with a corresponding increase in the recorded value. The details which are compiled from the Annual Statements of Trade and Navigation are as follows :—

| | | 1880-81. | 1881-82. | 1882-83. | 1883-84. | 1884-85. | 1885-86. | 1886-87. | 1887-88. | 1888-89. |
|---|---|---|---|---|---|---|---|---|---|---|
| Bombay .. | Quantity in Tons .. | 2,927 | 3,247 | 6,428 | 20,856 | 8,362 | 9,475 | 8,043 | 11,214 | 11,574 |
| | Value in Rs. .. .. | 1,33,619 | 1,37,824 | 2,73,393 | 10,68,678 | 4,10,384 | 5,21,025 | 4,45,838 | 6,63,988 | 6,71,430 |
| Karáchi .. | Quantity in Tons .. | — | .. | .. | 703 | 2,287 | 1,196 | 1,567 | 2,876 | 8,209 |
| | Value in Rs. .. .. | .. | .. | .. | 32,826 | 1,07,539 | 54,342 | 58,906 | 1,21,108 | 3,68,057 |

This increasing export has attracted the attention of those interested in agriculture, and in 1883 Lieutenant-Colonel Nutt brought it to the notice of Government and asked for legislation to stop it. Government decided that legislation was inadvisable and concurred in Mr. Ozanne's view that the exports could be stopped by creating a counter-demand. At present there is hardly any demand for animal bones either in agriculture or in manufacture of the Presidency.

In 1885 Mr. S. Cooke, Professor of Chemistry at the College of Science, Poona, took out a patent for a highly concentrated manure containing ground bones. He has not been able to bring the manure into use (paras. 139 and 140 of Annual Report, 1884-85). In 1886 Mr. Woodrow, Lecturer on Botany and Agriculture, attempted to prepare on the College Farm (now Poona Farm) some bone manure, but was not successful, as the bone-mill on the Farm did not crush the bones to the required fineness (para. 107, Annual Report, 1885-86). At the Chinchli Show in Kolhápur a Maráthi pamphlet on bone manure, written by a graduate of the Saidápeth Agricultural College, Madras, was distributed *gratis* among the prize-winners. Special inquiry is being made on the subject as desired by the Government of India.

### *F.—Improved Agricultural Implements.*

40. Besides Mr. Gogte's arrowroot machine and Mr. Walshe's patent yoke, already noticed above, no other implements were tried.

### *G.—Agricultural and Cattle Shows.*

41. The principal shows of the year were :—

| Province. | Place. | Date. | Prize Money. | Contributions. |
|---|---|---|---|---|
| Deccan ... ... | Poona ... ... | 4th October 1888 ... | Rs. 4,741 | Rs. 3,000 Government; Rs. 1,260 private subscription. |
| Káthiáwár ... ... | Rájkot ... ... | 11th December 1888. | Rs. 1,209 and 43 diplomas. | Rs. 600 Government; Local Funds Rs. 750; Native Chiefs Rs. 509. |
| Sindh ... ... | Jacobábád ... | 7th January 1889... | Rs. 4,200 | Rs. 1,500 Government; Shikárpur Local Board Rs. 2,500; Upper Sind Frontier Local Board Rs. 1,200. |
| S. M. Country ... | Chinchli ... | 17th February 1889 . | Rs. 4,895 | Rs 2,000 Kolhápur Darbár; Chiefs of Miraj (Junior) and Rámdurg Rs. 1,000 each and other States Rs. 3,675. |
| Cutch ... ... | Bhúj ... .. | 5th March 1889 ... | Rs. 1,136 | All State expense. |
| Gujarát ... ... | Ahmedabad ... | 20th March 1889 ... | Rs. 2,640 and 14 diplomas. | Government Rs. 2,000; His Highness the Gáikwád Rs. 1,000; Ahmadabad Local Board Rs. 1,000; Kaira Local Board Rs. 500; Káthiáwád Chiefs Rs. 500. |

*Note.*—At Ahmadnagar the usual annual show was not held in 1888-89 owing to indifferent season.

*Poona Horse Show.*—The show was on the whole successful. It was the largest show ever held in Poona, the number of animals exhibited being 374 against 274 of last year. The brood mares over 14 hands, two-year old fillies and yearlings showed improvement, while the colts were mostly a poor class. It was noticed that some of the mares were badly mated. Several big, strong and upstanding remounts were purchased for Native Cavalry. The balance sheet showed a deficit of Rs. 330 over the receipts (Rs. 5,043) and the previous year's balance (Rs. 1,229). Of the Rs. 4,741 distributed in prizes, Rs. 3,860 were given to breeders and Rs. 881 to fancy classes.

*Rájkot Metropolitan Horse and Cattle Show.*—The show was far from satisfactory or successful. The number of horses exhibited was 355 as against 470 in the previous year. The remount class in particular was quite a failure, there being 17 entries in that class against 40 in the preceding year. The Superintendent of Police was not able to obtain a single remount, though he was anxious to make purchases. The folly of breeding from unsound sires has been very properly condemned and it is hoped that the Chiefs concerned will try to remove such animals. The cattle numbered only 150 and were of very inferior quality. The reasons assigned for the failure of the show are (I) that the holding of local shows by the Chiefs in their own States has had the effect of lessening the number of exhibits at the Metropolitan show, and (II) that this year the condition of animals was injuriously affected by the scarcity which prevailed throughout the province. Prizes, 82 in number, valued at Rs. 1,209 were distributed, in addition to 43 diplomas (30 for horses and 13 for cattle) given to the Chiefs.

*Sind Horse Show.*—This was the first Sind horse show held at Jacobabád, being a combination of the former shows held separately at Shikárpur and Jacobabád. The show was highly successful. The number of animals exhibited was 1,078, being 11 less than at the Jacobabád show and 459 more than at the Shikárpur show held in the preceding year. Of the animals exhibited, Upper Sind Frontier sent 685, Shikárpur 162 and Baluchistán 227. A small but decided improvement has been reported in the number and character of the young stock by Government stallions in the gelding classes. The number of good mules exhibited also showed a very remarkable improvement. Thirty-seven remounts and 9 mules were purchased at the show at an average price of Rs. 219 and Rs. 147 respectively, and Rs. 4,200 were distributed in 225 prizes.

*Kolhápur and S. M. Country Horse, Cattle and Agricultural Show.*—This was the seventh year of the show and it is evidently growing more and more popular, the animals brought to the fair numbering 22,357 against 6,663 in 1885, and the exhibits rising from 339 in 1885 to 714. The number of animals present at the fair, those exhibited at the show and the amount of prize money given are noted in the margin. The increase in the horse exhibits was remarkable, and the young stock in particular was so good that Rs. 342 were distributed in addition to the amount notified for horses. His Excellency the Governor's prize of Rs. 100 was divided equally between the best country bred bull from Belgaum and a country bred pony from Sátára. Copies of a vernacular pamphlet on bone manure were distributed gratis among prize-winners. Lectures were also delivered on agricultural subjects. The restriction of confining the prizes to residents in Kolhápur and the S. M. Country States was removed this year. Of the total prizes Rs. 2,067, or nearly two-fifths, were taken by the British Districts, Bhimthadi Táluka of Poona alone carrying Rs. 1,080. Horses and cattle to the amount of Rs. 53,000 were sold at the fair.

| | Number present at the fair. | Number exhibited at the show. | Prize Money. |
|---|---|---|---|
| | | | Rs. |
| Horses ... .. ... | 1,869 | 293 | 2,962 |
| Oxen ... ... ... | 17,557 | 341 | 1,433 |
| Buffaloes ... ... ... | 2,745 | 22 | |
| Sheep ... ... ... | 95 | 55 | |
| Agricultural produce ... | ... | 497 | 500 |

*Cutch Horse Show.*—The show is managed entirely by the Cutch State. Two hundred and fifty exhibits were classified, but there were few good animals entered, though the show on the whole was an improvement over that of the preceding year. Among galloways and mares there were some good animals; but the remount class had only 9 entries and it was a very middling lot. The prize money amounted to Rs. 1,136 and the total expense to Rs. 1,717.

*Ahmadabad Horse Show.*—The number of animals exhibited was 634 against 615 in the preceding year; almost all the animals belonged to the cultivators and *bonâ-fide* breeders for whose benefit the shows are held. The animals exhibited and prizes obtained by the districts and Native States are noted in the margin. The remount class was fairly good, and comprised many horses suitable for Native Cavalry and police remounts. Out of 56 exhibited 14 remounts were purchased. The worst feature of the show was the wretched condition to which the animals were reduced owing to scarcity of fodder. The judges declared the younger stock as permanently injured, and were obliged to withhold a great number of prizes. In the interest of horse-breeding it seems very desirable to make arrangements to purchase the offspring of Government sires when one year old, as there is great danger of fine colts turning out bad animals. In all 70 prizes of the value of Rs. 2,640 were awarded, besides 14 diplomas given to gazetted officers.

| District. | Animals. | Prize Money. |
|---|---|---|
| | No. | Rs. |
| Ahmadabad ... ... | 280 | 1,680 |
| Kaira... ... ... | 78 | 395 |
| Baroda .. ... | 159 | 290 |
| Mahi Kántha ... | 63 | 190 |

## VI.—CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

### *Cattle-breeding.*

42. It has been noticed above that in future the Bhadgaon Farm will be managed principally as a stock-breeding farm, and that on the Poona Farm attention will mainly be directed to the production of good milkers. These measures are of unquestionable utility in showing the way to careful and systematic breeding and in proving to demonstration the advantages of the system. But they are too inadequate to appreciably improve the agricultural stock of the country, which has, owing to several causes, deteriorated considerably. There is a consensus of opinion among those who are qualified to express an opinion on the subject that of the several causes, including careless feeding, want of good sires claims the first attention. Professional graziers such as Vanjáris, Rabáris and Dhangars possess good bulls, but they breed their cattle in a few selected localities, where pasture lands abound, and consequently their bulls are of very little use to the cultivators. A few rich people in towns and cities keep some really good bulls for the use of their own milch cattle. These bulls are also beyond the reach of village rayats. Gavlis or milkmen, who follow a system in breeding their cattle, know that sires transmit to their progeny their constitutional defects, and on no account will allow their cows to be covered by weak or deformed bulls or animals of inferior breed. But they, like rich men, generally live in towns, and their bulls are not available for use to the cultivators.

There is not so much ignorance about cattle-breeding among cultivators as is supposed to exist, nor are they so unmindful of the advantages of systematic cattle-breeding as they are believed to be. It is a well-known fact that in many parts of the Presidency the villagers purchase stud bulls at their joint expense. Many cultivators will get their cows served by a stud bull if one is available, and it is not rare to see heifers and cows taken from village to village in search of a bull of good breed. Sometimes cows in heat are separated from the rest of the herd, and are not allowed to mix with the rest of the cattle till they are covered by good bulls. It is true that steers are not gelded early, but the reason is that early castration is believed to act unfavourably on the growth of the animal. Again the "pounding" process of castration, which is commonly followed, requires an animal that has arrived at maturity. Some careful stock-owners use means to counteract the ill-effects of late castrations. Steers that have arrived at maturity are either sold off or separated from the rest of the herd. The former practice is more general, as it not only reduces the cost of keep, but lessens the chances of cows being covered by immature animals. The practice of suspending a piece of coarse cloth just behind the forelegs, to prevent a steer from covering a cow, is not uncommon.

Want of stud bulls was not formerly much felt, as it was supplied by village *pols* or sacred bulls. These sacred bulls were largely, and are still, to a very limited extent, dedicated to some deity, generally Shiv, in the funeral ceremonies of some elderly person in the family or in the fulfilment of a vow. Some high-

caste orthodox Hindus, who consider it unmeritorious to sell either a cow or a bull, liberate male calves, which add to the number of *pols*. The *pols* are, as required by the Shástras, free from any bodily deformity and hale and sound; they are never put to work, never confined, and seldom driven from fields; they simply become strong by their mode of living and constitute half wild and huge animals well suited for stud purposes in the absence of better ones. Except in the Karnátak districts, where a few *pols* are well cared for in the Jangam *maths* or monasteries of Lingáit priests, *pols* are fast becoming extinct. The provisions of the Cattle Pound Act, decrease in the area of free pasture land, and decline of faith in old beliefs are said to be among the chief causes of the reduction in the number of *pols*. The location of stud bulls in selected tracts at the cost of Local Funds is much needed. This Department has arranged to procure two bulls of Mysore breed for the Belgaum Local Board, and two bulls and two bull-buffaloes of the Gir (Jaffarabad) breed for the District Local Board of Poona.

*Veterinary Dispensaries.*

43. Now that passed students of the Bombay Veterinary College are available, Government have been pleased to authorise the Director to put himself in communication with Presidents of Municipalities and Local Boards and to offer Government aid to the extent of Rs. 400 per annum towards the maintenance of each veterinary hospital or dispensary under the following conditions :—

(*a*) That suitable quarters and necessary furniture and appliances are provided.

(*b*) That an annual expenditure not less than the Government grant is guaranteed from local resources.

(*c*) That Government should have the right of inspection by the Director of Land Records and Agriculture or any professional officer deputed for the purpose, and of requiring such returns, &c., as they may deem necessary to be submitted to them.

Up to this time 4 veterinary dispensaries have been established under the conditions imposed by Government. These are Ahmadabad, Nadiád (in Kaira), Násik, and Dhulia (in Khándesh). The officers in charge of dispensaries are bound to visit the localities of cattle-diseases in the district and to help the villagers in treating their cattle without levying any fees.

*Bacteriological Laboratory.*

44. It has been settled to establish a central Bacteriological Laboratory at Poona. The Committee appointed by Government Resolution No. 7927, dated 19th October 1889, Revenue Department (of which the Director was a member) has submitted its report on the working plan for operations in connection with the study and treatment of cattle-disease in India.

*Cattle-Disease.*

45. Mr. Steel, Principal of the Veterinary College, visited the Bhadgaon Farm in May last, during the prevalence of goat disease, and made a scientific investigation on the spot, the result of which is summarized in Appendix A.

In the Season Telegrams published in the *Government Gazette*, cattle-disease was reported from eight districts—Broach, Surat, Khándesh, Ahmadnagar, Sholápur, Kánara, Ratnágiri and Dhárwár. The information as to the extent, duration, treatment, &c., obtained from the Collectors and the remarks of Mr. Steel, thereon, are given in Appendix B.

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

### A.—AGRICULTURAL.

46. This year the important feature is that owing to the introduction of the Sind Manual, most of the Sind district returns, especially crop statistics, have been compiled for the first time on the model of the district returns of the Presidency Proper. The details of cereals and pulses of the *kharíf* and *rabi* seasons respectively for the Presidency Proper were received in full. These are shown in an appendix to Return No. III. Almost all the land (other than actually cropped) belonging to alienated villages and villages held on special tenures, such

as Tálukdári, Mehvási, &c., was shown under the head "Current Fallows" in Return No. II. This practice gave a wrong idea of the area available for cultivation in each district. It has been arranged with the Collectors to remedy this defect.

In addition to the district returns published with the annual reports of this Department, statistics for each táluka, relating to crops, agricultural stock and rainfall, are compiled in a bound book, so that the statistical record for each táluka for a series of years may be available at any time for administrative purposes. Statistics of prices, which form an important basis of land assessment, were wanting to complete the record kept in this office. The Divisional Commissioners have lately directed that an annual return containing the totals struck in Táluka Form No. 38, should be forwarded by the Mámlatdárs to the Director for compilation and scrutiny. The return ordered by the Divisional Commissioners has been printed as a Standard form. The returns received from the táluka officers show that in some tálukas Price Registers were not kept as required by the Manual (pp. 280-281), though the staple products for which prices were required had been fixed and indicated more than a year and a half ago, and that in many cases inattention to the instructions given in the Manual rendered the returns useless for settlement purposes. The result of the scrutiny made by this Department is communicated from time to time to the district officers. It is hoped that the orders of the Divisional Commissioners and the scrutiny of the district officers, will secure the compilation of correct price statistics in the form prescribed by the Revenue Manual.

The district returns show some improvement in compilation, but very little in respect to punctuality. The returns for the districts noted in the margin were received more than a month and a half later than the prescribed date (1st September). Thus very little time was allowed to this office to make references in respect to points requiring further elucidation. Detailed explanatory memoranda giving the causes of variations in the returns, were received only from the eight districts noted in the margin. The reviews received from Dhárwár and Bijápur, where both the táluka and the huzúr compilations are prepared by the agricultural staff, were as usual complete. The water-supply return being quinquennial falls due in 1891-92. In his full and interesting review of the agricultural returns, Mr. Blathwayt, the Collector of Kánarà, remarks as follows:—

| | Date of receipt. |
|---|---|
| Surat ... ... | October 16th, 21st. |
| Ahmadnagar ... | Do. 16th |
| Násik ... ... | Do. 17th |
| Karáchi ... ... | Do. 18th |
| Poona ... ... | Do. 19th |
| Hyderabad ... | Do. 19th |
| Thána ... ... | Do. 22nd, 24th |
| Thar and Párkar | Do. 25th |

| | |
|---|---|
| Ahmadabad. | Násik. |
| Kaira. | Sátára. |
| Broach. | Belgaum. |
| Khándesh. | Kánara. |

"The absence of uniformity in the method of keeping the statistical returns detracts much from their value. The present staff of general duty kárkúns have neither the time nor the special training necessary for a punctual and effective supervision over the doings of the village accountants. Accuracy in results cannot be secured so long as the present system continues. The district possesses a fairly efficient class of village accountants. What it requires is a specially trained class of Circle Inspectors. It is unnecessary to mention that errors in the statements of one district or táluka will considerably impair the accuracy of general inferences drawn for the Presidency as a whole."

**Return No. I.—Area of Available Statistics.**

47. Gross Area.—The gross area, in spite of a nominal increase of 21 in the number of villages, shows a decrease of 26,000 acres in the Presidency Proper. The variations are chiefly noticeable in the districts noted in the margin. In Khándesh the decrease (33,677 acres) in Government villages is not fully explained, but it is apparently mostly due to the less area being returned as *kamál* or cultivated land according to the *nazar-andáj* (eye-estimate) system prevalent in the unsurveyed villages of the Western Dáng tracts. The increase (11,942 acres) in alienated villages is accounted for by the transfer of Government waste in Dumála or alienated villages, from the head "Government villages" to that of "Alienated." This fact also partly accounts for the decrease in Government villages noted above. In other districts the variations are principally due to the survey operations. In Násik the area of certain forest lands in the Peint Táluka was measured and recorded for the first time during the year. In Belgaum the area

| | Government Acres. | Alienated Acres. |
|---|---|---|
| Khándesh ... ... | −33,677 | +11,942 |
| Násik ... ... | +15,080 | ..... |
| Belgaum ... ... | +2,668 | +23,128 |
| Ratnágiri ... ... | +8,308 | −9,191 |
| Kánara ... ... | −46,175 | ..... |

of unsurveyed alienated villages, which was before recorded in local measures—cháhurs, hons, &c.—was approximately converted into the English acres. In Ratnágiri the variation is attributed to the re-measurement of varkas lands. In Kánara the area of 104 unsurveyed villages of the Siddápur Táluka was last year roughly entered at 128,290 acres. Under the survey operations the correct area of the tract has this year been returned at 82,680 acres. In the Province of Sind the gross area shows a very large increase of about 30 lákhs of acres or 13·09 per cent. The increase is attributed principally to the progress of the survey operations. It is large in Karáchi (17 lákhs), Upper Sind Frontier (9 lákhs) and Thar and Párkar (3 lákhs).

48. **Area of available statistics.**—The area of available statistics shows an increase of 171,000 acres or 0·38 per cent. in the Presidency Proper. The variations are shown in the margin. In Khándesh the increase is due to the transfer of entire forest villages to the head "available" during the year; the decrease is accounted for by the transfer of *nazar-andáj* villages of the Taloda Táluka to the proper head "not available." In the Panch Maháls, Kaira and Bijápur, the increase is due to the transfer of certain villages from the head "not available" to the head "available," owing to the completion of the survey operations. The two Dhárwár villages, of which the village papers were last year mislaid, have been shown under the head "available." The Sind figures show a rise from 10,508,000 to 17,541,000 acres, or an increase of 66·92 per cent. This is principally due to the introduction of the Manual and the progress of the survey operations.

| | Villages. | Area. |
|---|---|---|
| Khándesh ... | +54 | +93,000 |
| | −123 | −18,000 |
| | −69 | +75,000 |
| Panch Maháls ... | +45 | +72,503 |
| Kaira ... ... | +1 | +2,487 |
| Bijápur ... ... | +1 | +7,222 |
| Dhárwár ... ... | +2 | +2,680 |

**Return No. II.—Cultivated and Uncultivated Area.**

49. The following table summarises the information contained in Returns Nos. 1 and 2:—

| No. | District. | Percentage on gross area of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas, | | | | |
|---|---|---|---|---|---|---|---|
| | | | Cultivated. | | Uncultivated. | | Forest. |
| | | | Actually cropped. | Current fallows. | Available for cultivation. | Not available for cultivation. | |
| | A.—Presidency Proper. | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 1·00 | 54 | 23 | 4 | 18 | 1 |
| 2 | Kaira ... ... ... | 8·49 | 73 | 7 | 8 | 12 | ... |
| 3 | Panch Maháls ... ... | 15·71 | 33 | 12 | 33 | 9 | 13 |
| 4 | Broach ... ... ... | 1·99 | 62 | 8 | 3 | 27 | ... |
| 5 | Surat ... ... ... | 2·45 | 45 | 27 | 6 | 18 | 4 |
| | Average ... | 4·89 | 53 | 18 | 9 | 17 | 3 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 9·96 | 55 | 6 | 17 | 12 | 10 |
| 7 | Násik ... ... ... | 4·21 | 52 | 13 | 5 | 9 | 21 |
| 8 | Ahmadnagar ... ... | 2·51 | 63 | 12 | 2 | 10 | 13 |
| 9 | Poona ... ... ... | 1·16 | 61 | 11 | 1 | 15 | 12 |
| 10 | Sholápur ... ... | ... | 72 | 12 | 1 | 9 | 6 |
| 11 | Sátára ... ... ... | 4·26 | 60 | 14 | 1 | 10 | 15 |
| | Average ... | 4·34 | 60 | 11 | 6 | 11 | 12 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 0·99 | 61 | 11 | 5 | 8 | 15 |
| 13 | Bijápur ... ... ... | 0·73 | 74 | 10 | 5 | 6 | 5 |
| 14 | Dhárwár ... ... | 2·57 | 71 | 9 | 3 | 7 | 10 |
| | Average ... | 1·30 | 70 | 10 | 4 | 7 | 9 |

| No. | District. | Percentage on gross area of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas, | | | | |
|---|---|---|---|---|---|---|---|
| | | | Cultivated. | | Uncultivated. | | Forest. |
| | | | Actually cropped. | Current. fallows. | Available for cultivation. | Not available for cultivation. | |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 3·97 | 21 | 20 | 7 | 34 | 18 |
| 16 | Kolába ... ... ... | 2·39 | 33 | 21 | 4 | 23 | 19 |
| 17 | Ratnágiri ... ... | 28·72 | 26 | 44 | 1 | 28 | 1 |
| 18 | Kánara ... ... ... | 3·39 | 10 | 3 | 38 | 10 | 39 |
| | Average ... | 10·81 | 20 | 20 | 15 | 24 | 21 |
| | Average A ... | 5·00 | 54 | 13 | 8 | 13 | 12 |
| | B.—Sind. | | | | | | |
| 19 | Karáchi ... ... ... | ... | 7 | 10 | 13 | 68 | 2 |
| 20 | Hyderabad ... ... | ... | 13 | 24 | 35 | 27 | 1 |
| 21 | Shikárpur ... ... | 17·68 | 17 | 18 | 42 | 17 | 6 |
| 22 | Upper Sind Frontier .. | 49·39 | 23 | 39 | 19 | 13 | 6 |
| 23 | Thar and Párkar ... | 78·03 | 20 | 30 | 50 | ... | ... |
| | Average B ... | 32·15 | 14 | 20 | 31 | 32 | 3 |
| | Average for the Presidency ... ... ... | 14·57 | 43 | 15 | 14 | 19 | 9 |

Gross cropped area.

50. The gross cropped area of the Presidency Proper shows a decrease of 236,000 acres or 0·93 per cent. The decrease is general and especially large in Gujarát and Násik; a few districts show considerable increase, as noted in the margin. The decrease is due to scanty and irregular rainfall which did not allow of full sowing. In Gujarát the area of *rabi* was generaly much less than usual, owing to the absence of the closing rains in September, except in Broach where the rainfall was apparently more seasonable. In Sholápur and the Karnátak, the kharíf rain was equally deficient as in the other Deccan districts, but the deficiency was more than made up by the abundant fall in September-October, and rabi sowings were fuller than usual.

| | Thousand Acres. |
|---|---|
| Ahmadabad ... ... ... | —42 |
| Kaira ... ... ... ... | —27 |
| Panch Mahals.. ... ... | —45 |
| Surat ... ... ... ... | —60 |
| Khándesh ... ... ... | —18 |
| Násik ... ... ... ... | —96 |
| Ahmadnagar ... ... ... | —25 |
| Poona ... ... ... ... | —21 |
| Broach ... ... ... ... | +13 |
| Sholápur ... ... ... | +26 |
| Bijápur... ... ... ... | +35 |
| Belgaum ... ... ... | +9 |
| Ratnágiri ... ... ... | +21 |

Twice-cropped area.

51. The twice-cropped area shows a decrease of 69,000 acres or 11·55 per cent. The decrease is general, but especially large in the marginally noted districts. One district in Gujarát, *i. e.* Ahmadabad, shows a large increase. There was considerable increase in Poona, Bijápur and Dhárwár. The general decrease is attributed to the circumstance that though the land left unsown for early crops was subsequently sown with rabi crops, the scanty rains did not allow of the raising of two crops in the full area. The large increase in Ahmadabad (73,000 acres in 1888-89 against 23,000 in 1887-88) is partly due to faulty registration. The Collector remarks: "I am afraid it includes cases in which a second crop was raised on failure of the first owing to scanty rainfall."

| | Thousand Acres. |
|---|---|
| Surat ... ... ... ... | —58 |
| Panch Mahals ... ... ... | —53 |
| Kaira ... ... ... ... | —10 |
| Ahmadabad ... ... ... | +50 |

Cultivated area.

52. The total cultivated area shows an increase of 49,800 acres or 0·16 per cent. The increase is especially large in Ahmadnagar (33,000 acres) and considerable in Sholápur (14,000 acres). In Ahmadnagar the increase is attributed to the taking up of Government waste land for cutivation. Much of this land was left unsown, owing to scanty rainfall, as will be seen from the large increase under 'fallow.' In Sholápur also more land was taken up for cultivation.

Net cropped area and fallow.

53. Though the cultivated area on the whole shows small variations except in the two districts named above, the variations in the net cropped area and fallow are considerable throughout. Owing to the unfavourable season, the net cropped area fell by 167,000 acres or 0·67 per cent., while the fallow increased by 217,000 acres or 3·79 per cent. The principal variations are shown in the margin. A few districts show considerable increase in the net cropped area for the reasons noticed above under gross cropped area.

| | Net cropped. | Fallow. |
|---|---|---|
| | Thousand Acres. | |
| Ahmadabad ... | —92 | +87 |
| Kaira ... ... | —17 | +19 |
| Broach ... ... | +12 | —11 |
| Násik ... ... | —89 | +80 |
| Ahmadnagar ... | —20 | +54 |
| Poona ... ... | —27 | +29 |
| Sholápur ... ... | +25 | —11 |
| Bijápur ... ... | +33 | +30 |
| Belgaum ... ... | +11 | —10 |

54. The land available for cultivation shows a decrease of 73,000 acres or 4·28 per cent. The decrease is partly due to more land taken up for cultivation and partly to the transfer of certain lands to the head "Forest."

Uncultivated area.

55. The total area under forest is returned at 54 lákhs of acres, which is much less than the area returned in the Forest Administration Report. Steps are being taken to reconcile the discrepancy as directed in Government Resolution No. 7260 dated 27th September 1889, Revenue Department. According to this year's returns the forest area rose by 325,000 acres or 6·39 per cent. The increase is general all over, and most noticeable in the districts noted in the margin. In Khándesh the area of 54 entire forest villages (93,000 acres) was for the first time returned under the area of available statistics during the year. In Násik, Bijápur, Ahmadnagar and Ahmadabad districts the Government waste, partly cultivable and partly uncultivable, was included under forest. For other districts no explanations have been received.

Forest.

| | Thousand acres. |
|---|---|
| Khándesh ... | +108 |
| Thána ... ... | +62 |
| Násik ... ... | +38 |
| Bijápur ... ... | +27 |
| Panch Maháls ... | +27 |
| Ahmadabad ... | +21 |
| Ahmadnagar ... | +16 |
| Belgaum ... ... | +11 |
| Kánara ... ... | +7 |

**Return No. III.—Crops.**

56. The rainfall was on the whole less favourable for sowing operations than last year. Jowári and sugarcane show an increase, while cereals other than jowári, pulses, cotton, tobacco and oil-seeds show a general decrease. In the Konkan, Gujarát, Khándesh and western tracts of the Deccan and Karnátak bordering on the Sahyádris, the kharíf sowing rain, though irregular in places, was generally sufficient and seasonable, and the full kharíf area was sown except perhaps in parts of Gujarát. But in the East Deccan and Karnátak, much of the kharíf land was left unsown owing to deficient rainfall, and part of the land, even where sown with kharíf, was replaced by rabi. Here, however, excellent rain fell for rabi sowing, while in Gujarát, owing to the absence of the September rain, the rabi area would have been almost *nil* but for the cyclonic rain that came early in November. The effects of the season seem to have been most felt on the non-food crops, the area having fallen by 338,000 acres or 7 per cent., while the food crops show an increase of 101,000 acres or 0·5 per cent. This goes to prove that even in an indifferent season the rayats take care to sow the full area, as far as the season allows, with the food crops.

57. The following table shows at a glance the effect of the season, as far as the area sown is concerned :—

PRESIDENCY PROPER.

| Crops. | 1887-88. | 1888-89. | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|
| | Thousand Acres. | Thousand Acres. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| Jowári ... ... ... ... | 7,121 | 8,510 | 1,389 | 19·5 | ... | ... |
| Bájri ... ... ... ... | 4,638 | 3,845 | ... | ... | 793 | 17·1 |
| Paddy ... ... ... ... | 1,725 | 1,605 | ... | ... | 120 | 6·9 |
| Wheat ... ... ... ... | 2,209 | 2,078 | ... | ... | 131 | 5·9 |
| Others ... ... ... ... | 2,002 | 2,012 | 10 | 0·5 | ... | ... |
| Total Cereals ... | 17,695 | 18,050 | 355 | 2·0 | ... | ... |
| Tur ... ... ... ... | 547 | 508 | ... | ... | 39 | 7·1 |
| Gram ... ... ... ... | 792 | 731 | ... | ... | 61 | 7·7 |
| Others ... ... ... ... | 1,224 | 1,035 | ... | ... | 189 | 15·4 |
| Total Pulses ... | 2,563 | 2,274 | ... | ... | 289 | 11·2 |
| Tobacco... ... ... ... | 80 | 49 | ... | ... | 31 | 38·7 |
| Sugarcane ... ... ... | 81 | 89 | 8 | 9·8 | ... | ... |
| Oil-seeds ... ... ... | 1,641 | 1,482 | ... | ... | 159 | 9·6 |
| Cotton ... ... ... ... | 2,816 | 2,665 | ... | ... | 151 | 5·3 |
| Food Crops Total ... | 20,492 | 20,593 | 101 | 0·5 | ... | ... |
| Non-food Crops Total ... | 4,810 | 4,472 | ... | ... | 338 | 7·0 |
| GRAND TOTAL ... | 25,302 | 25,065 | ... | ... | 237 | 0·9 |

**Jowári.**—The increase of nearly 14 lákhs or 19·5 per cent. is general throughout. Dhárwár alone is an exception, giving an appreciable decrease. The increase is especially large in the Deccan and Karnátak, where, as noticed above, much of the usual kharíf land was left unsown owing to scanty rain, and the late rains being favourable, all available land was sown with shálu or rabi jowári. In Gujarát and Khándesh, where jowári is an early or kharíf crop, the early rains were seasonable for the jowári sowing. The small decrease in Dhárwár where the red variety is grown as a kharíf and the white as a rabi crop, is attributed partly to heavy rain in August which prevented its full sowing, and partly to the circumstance that the rice land in the Mallád, which was last year sown with jowári owing to the deficient sowing rain, was this year devoted to the usual crop—rice—under the favourable rainfall.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... ... ... | +514 |
| Sholápur ... ... ... | +182 |
| Bijápur ... ... ... | +123 |
| Sátára ... ... ... ... | +105 |
| Belgaum ... ... ... | +99 |
| Poona ... ... ... ... | +95 |
| Násik ... ... ... ... | +82 |
| Broach... ... ... ... | +61 |
| Khándesh ... ... ... | +53 |
| Ahmadabad ... ... ... | +51 |
| Surat ... ... ... ... | +39 |
| Dhárwár ... ... ... | —16 |

**Bájri.**—The decrease of about 8 lákhs or 17·1 per cent. is confined to the Deccan and Karnátak, while the Gujarát districts and Khándesh show a considerable increase. The large decrease in the Deccan and Karnátak, due to the scanty kharíf rain, is more than counterbalanced by an equally large increase in jowári. In Gujarát and Khándesh the kharíf sowing rain was favourable for jowári as also for bájri.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... ... ... | —479 |
| Poona ... ... ... ... | —104 |
| Násik ... ... ... ... | —80 |
| Sátára ... ... ... ... | —74 |
| Sholápur ... ... ... | —69 |
| Belgaum ... ... ... | —59 |
| Kaira ... ... ... ... | +44 |
| Khándesh ... .. ... | +42 |
| Ahmadabad ... ... ... | +23 |

**Paddy.**—The decrease of $1\frac{1}{4}$ lákhs or 6·9 per cent. is all confined to Gujarát. The monsoon began very late, especially in North Gujarát, and the rainfall was generally both scanty and unseasonable for sowing paddy. Elsewhere in the Presidency, the variations are small and the sowing season was on the whole a normal one.

| | Thousand Acres. |
|---|---|
| Kaira ... ... ... ... | —58 |
| Ahmadabad ... ... ... | —54 |
| Surat ... ... ... ... | —8 |
| Panch Mahále ... ... | —7 |
| Broach ... ... ... | —6 |

**Wheat.**—The decrease of $1\frac{1}{4}$ lákhs or 5·9 per cent. is general in the Deccan and Gujarát (except Kaira), while the Karnátak districts show a general increase. The decrease is specially large in Khándesh and Gujarát, where late rains were very scant, and the sowings rendered possible only by the cyclonic rain of November. The continuous increase in wheat in the Karnátak, followed by a corresponding decrease in cotton, gives grounds for a belief that, as noticed in last report, wheat is here probably displacing cotton—a result partly attributable to the increased demand for the staple for export and partly to the facility afforded for export by the introduction of the Southern Marátha Railway.

| | Thousand Acres. |
|---|---|
| Khándesh ... ... ... | —65 |
| Broach ... ... ... | —51 |
| Surat ... ... ... | —21 |
| Panch Mahále ... ... | —17 |
| Ahmadabad ... ... | —7 |
| Bijápur ... ... ... | +21 |
| Belgaum ... ... ... | +12 |
| Dhárwár ... ... ... | +10 |

**Other Cereals.**—Chiefly the coarse grains rála, rági, vari and kodra show on the whole a decrease of 52 thousand acres or 2·90 per cent. The coarse grains are largely grown in the Konkan and near the Ghát and in parts of Gujarát, and form the articles of staple food of the poorer classes. Rála is almost all grown in the Karnátak and South Deccan. In the Panch Mahále where it is a staple crop, maize occupied 91,000 acres against 70,000 acres, or an increase of 30·18 per cent.

| | Thousand Acres. |
|---|---|
| Rála ... ... ... | —35 |
| Rági ... ... ... | —25 |
| Vári ... ... ... | —8 |
| Kodra ... ... | +16 |

**Barley.**—The area under barley shows a considerable increase chiefly in North Gujarát where the kharíf land left unsown was devoted to the barley crop under the favourable fall of November. Barley is cultivated to a considerable extent in the districts noted in the margin. This crop has now a demand for export.

| | 1887-88. | 1888-89. |
|---|---|---|
| | Acres. | Acres. |
| Ahmadabad ... | 20,800 | 34,100 |
| Kaira .. ... | 7,900 | 10,700 |
| Sátára ... ... | 4,600 | 5,700 |
| Sholápur ... ... | 1,000 | 1,200 |
| Poona ... ... | 700 | 2,200 |

**Pulses.**—There is a general decrease of nearly 3 lákhs or 11·2 per cent. Pulses are largely sown mixed with bájri or jowári. The details given under kharíf and rabi (*vide* para. 58) show that nearly two-thirds of the total pulses are grown as a kharíf or early and one-third as a rabi or late crop. The decrease is thus generally ascribed to the deficient kharíf rains in the Deccan and Karnátak. Both gram and tur show a general decrease, with a few exceptions, chiefly in the Deccan and Karnátak. The large increase under gram in Ahmadabad is attributed to the circumstance that much land which remained fallow or had yielded very little in the kharíf season, was laid under this crop after the cyclone of 9th November.

| | Thousand Acres. |
|---|---|
| *Gram.* | |
| Panch Mahále ... ... | —37 |
| Khándesh ... ... | —29 |
| Sholápur ... ... | —13 |
| Bijápur ... ... | —7 |
| Ahmadabad ... ... | +23 |
| Ahmadnagar ... | +10 |
| *Tur.* | |
| Ahmadnagar ... | —28 |
| Belgaum ... ... | —8 |
| Bijápur ... ... | +11 |

**Tobacco.**—There is a substantial decrease of 31,000 acres, the area having fallen from 80 to 49 thousands or 38·7 per cent. The decrease is general in all the districts without a single exception, and is most noticeable in the districts noted in the margin. The decrease is generally attributed to scanty and unseasonable rainfall, as also to large stocks of previous years. It is said that the importation of foreign tobacco has also contributed to some extent to the decrease. Enquiry is being made on this point.

| | Acres. |
|---|---|
| Ahmadnagar ... .. | —5,200 |
| Sholápur ... ... ... | —5,200 |
| Belgaum ... ... ... | —4,200 |
| Kaira... ... ... ... | —4,100 |
| Khándesh ... ... ... | —3,600 |
| Sátára ... ... .. | —1,900 |
| Poona ... ... ... | —1,400 |
| Broach ... ... ... | —1,200 |
| Bijápur ... ... ... | —1,200 |
| Násik... ... .. ... | —900 |

**Sugarcane.**—The increase of 9·8 per cent. is general, except in Gujarát where the decrease is attributed to low prices of raw sugar (*gul*) in the previous year. In Dhárwár the large increase is attributed to the circumstance that the heavy rain of October-November encouraged the plantation of sugarcane, and to this, as also to the irrigation canals, may also be partly attributed the corresponding increase in the other districts of the South Deccan and Karnátak.

| | Acres. |
|---|---|
| Dhárwár ... ... | +2,900 |
| Belgaum ... | +2,500 |
| Sátára ... ... | +1,600 |
| Poona ... ... | +1,500 |
| Sholápur ... .. | +700 |
| Ahmadabad... .. | —1,300 |
| Kaira... .. ... | —900 |

**Oil-seeds.**—The decrease of 1½ lákhs or 9·6 per cent. is chiefly confined to linseed and sesame. Among other oil-seeds, *kardai* or safflower which is largely grown in the Deccan and Karnátak, shows an increase of 39 thousand acres or 7·73 per cent., concurrently with the rise in wheat and jowári which it accompanies. Castor and niger-seeds show a decrease of 68 thousand acres or 17·57 per cent. In Surat alone, where it is largely grown, the castor-seed owing to deficient late rains fell from 33 to 17 thousand acres or 48·91 per cent.

| | Thousand Acres. |
|---|---|
| Linseed ... ... | —94 |
| Sesame ... ... | —43 |
| Others ... ... | —22 |

**Linseed.**—The decrease of nearly a lákh or 30·45 per cent. is general, but two districts, Sátára and Ahmadnagar, show a small increase. The decrease is generally attributed to deficient sowing rain.

| | Thousand Acres. |
|---|---|
| Násik ... ... ... | —29 |
| Khándesh ... ... ... | —25 |
| Bijápur ... ... ... | —24 |
| Sholápur ... ... ... | —18 |
| Sátára ... ... ... | +6 |

**Sesame.**—The decrease of 43 thousand acres or 14 per cent. is general, except in the Karnátak which shows a small increase. Sesame is raised as a kharíf crop, for which the rainfall was unfavourable in the Deccan where the decrease is especially large.

| | Thousand Acres, |
|---|---|
| Násik ... ... ... | —17 |
| Ahmadnagar ... ... | —12 |
| Poona ... ... ... | —12 |
| Ahmadabad ... ... | —7 |
| Panch Mahále ... ... | —7 |
| Dhárwár ... ... ... | +5 |
| Bijápur ... ... ... | +4 |

**Cotton.**—The decrease of 1½ lákhs or 5·3 per cent. is general and notably large in Ahmadabad, Belgaum and Bijápur; while in Broach, Dhárwár and Khándesh, the other three principal cotton-growing districts, there is a small increase. The decrease in Ahmadabad is attributed to rotation of crops, under which the last year's cotton area was partly replaced by jowári or bájri; it is also partly due to unseasonable sowing rain The decrease in Belgaum and Bijápur is attributed to insufficient rainfall in *Magha* and *Purva* in early Sep-

| | Thousand Acres. |
|---|---|
| Ahmadabad ... ... | —71 |
| Belgaum ... ... | —40 |
| Bijápur ... ... | —29 |
| Surat... ... ... | —8 |
| Násik ... ... | —7 |
| Ahmadnagar ... | —6 |
| Sátára ... ... | —6 |
| Broach ... ... | +8 |
| Dhárwár ... ... | +5 |
| Khándesh ... .. | +4 |

tember, when cotton is generally sown in the Karnátak; but, as remarked above, it is probable that cotton in these districts is being partly displaced by wheat. In the Deccan districts, where cotton is grown as an early crop, the decrease is due to deficient kharíf rains; the area here is, however, not extensive.

**Potato.**—The crop was raised over 11,700 acres against 12,200 acres in the last year, chiefly in the districts noted in the margin. Apart from its use as food on ordinary days, it is in extensive use all over the country among Hindus on days of fast when grains are forbidden. The Mahábaleshvar potato is well known. In Ahmadabad it is cultivated largely, especially in the beds of rivers which are peculiarly well adapted for its growth. At the Bhadgaon Farm in Khándesh it was grown so successfully some years ago, and the rayats took up its cultivation so readily that Páchora has now become a market for potatoes. Potato is very extensively cultivated in the Poona district, chiefly in Khed, Sirúr, Junnar and Purandhar tálukas. The produce finds its way to the Poona and Bombay markets. In the Khed Táluka where the area under potato (7,000 acres) is the largest, potato is one of the best paying agricultural products. Potato of two varieties is grown—one the mealy which has a thin, smooth, light brown peel, and the other having a thick, rough, dark peel, which becomes waxy when cooked. For the better kind, the country is indebted to the late Dr. Gibson who in 1838 imported the Nilgherry, and again in 1845 an excellent stock of the Irish potato. Potato is produced in the deep red soils which prevail in the north-east of the táluka. Land yielding potato is usually cropped twice during the year. As a dry crop, it is planted in July and gathered about the end of September, and as a garden crop, it is planted in December and gathered in February. Owing to the ready sale it meets in the Poona and Bombay markets and the large profit it yields, the cultivation of potatoes has very considerably increased, having in some instances entirely superseded that of sugarcane. The produce of the Khed Táluka is now sent by the cultivators direct from the Talegaon Station to Bombay. The potato merchants of Bombay write their orders by post direct to the principal cultivators. From experiments conducted by the Assistant Settlement Officer, Mr. Whitcombe, the yield of potatoes per acre from dry-crop land was found to be 12,000 lbs. and from irrigated land 18,000 lbs. The prices ruling since 1848-49 have fluctuated from Rs. 2 to Rs. 7 per palla of 240 lbs.[1]

| | Acres. |
|---|---|
| Poona ... ... ... | 9,800 |
| Ahmadnagar ... ... | 550 |
| Sátára ... ... ... | 530 |
| Ahmadabad ... ... | 200 |
| Kaira ... ... ... | 190 |

**Green Fodder.**—Lucerne occupied 659 acres, chiefly in Ahmadnagar and Poona, and guinea grass 268 acres, almost all in Ahmadabad. These crops are cultivated principally to meet the demand for the cantonment animals. The demand for these fodders has also gradually been growing among the native gentry. Hot-weather jowári, which is the only crop cultivated for fodder to a considerable extent, shows an increase from 13,300 to 20,900 acres. The increase is chiefly due to scarcity of the regular fodder supply owing to deficient rainfall.

58. **Kharif and Rabi.**—The details, given for the first time in the supplementary Statement A appended to Return No. 3, show that jowári among the cereals is generally grown as a kharíf crop in Gujarát and Khándesh and as a rabi crop in the Deccan Proper; in the Karnátak, the red variety is grown as a kharíf and the white as a rabi crop, generally in a fairly equal proportion which varies with the seasonableness or otherwise of the rainfall. Wheat and barley are almost exclusively rabi crops. Other cereals are almost all grown as kharíf, except that rice in the South Konkan, maize in the Deccan and rála in the Karnátak are also to some extent grown as rabi crops. The pulses are generally raised both as kharíf and rabi crops, the proportion being two-thirds under the former and one-third under the latter. Tur, mug, udid, math, chavli and kulith are, however, principally grown as kharíf, and gram, vátána, masur, and láng as rabi crops, while vál is cultivated both as kharíf and rabi in a fairly equal proportion.

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[1] Revision Survey Settlement Report of the Khed Táluka, 1889. Bombay Government Selection No. CCXXV—New Series.

59. The usual two returns are appended. Statement A shows the distribution of the principal crops in each district including Sind. Statement B shows the proportion which the area under the several crops in each district holds with respect to the gross area in the Presidency Proper:—

*A.—Percentages of Food and other Crops on the gross area cropped in each District.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food crops. | Non-food crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | **A.—Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 24 | 17 | 2 | 13 | 4 | 3 | 63 | 7 | 1 | 26 | 3 | ... | 71 | 29 |
| 2 | Kaira ... ... ... ... | 9 | 32 | 11 | 4 | 25 | 2 | 83 | 9 | 2 | 1 | 2 | 3 | 94 | 6 |
| 3 | Panch Mahále ... ... ... | 1 | 15 | 17 | ... | 19 | 32 | 84 | 8 | 1 | ... | 6 | 1 | 93 | 7 |
| 4 | Broach ... ... ... ... | 29 | 3 | 3 | 3 | 2 | ... | 40 | 8 | 5 | 45 | 2 | ... | 53 | 47 |
| 5 | Surat ... ... ... ... | 28 | 2 | 20 | 3 | 12 | ... | 65 | 9 | 2 | 19 | 4 | 1 | 76 | 24 |
| | Average ... | 20 | 16 | 8 | | 10 | 4 | 65 | 8 | 2 | 21 | 3 | 1 | 75 | 25 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 19 | 21 | 1 | 12 | 1 | ... | 54 | 6 | 1 | 33 | 5 | 1 | 61 | 39 |
| 7 | Násik ... ... ... ... | 9 | 33 | 3 | 20 | 11 | ... | 76 | 11 | 1 | 1 | 11 | ... | 88 | 12 |
| 8 | Ahmadnagar ... ... ... | 55 | 16 | ... | 11 | 2 | ... | 84 | 8 | ... | 1 | 6 | 1 | 92 | 8 |
| 9 | Poona ... ... ... ... | 40 | 29 | 3 | 6 | 4 | 1 | 83 | 8 | 1 | ... | 7 | 1 | 92 | 8 |
| 10 | Sholápur ... ... ... | 67 | 9 | 1 | 2 | ... | 1 | 80 | 7 | 1 | ... | 11 | 1 | 88 | 12 |
| 11 | Sátára ... ... ... ... | 33 | 26 | 2 | 4 | 8 | 1 | 74 | 16 | 2 | ... | 6 | 2 | 92 | 8 |
| | Average ... | 37 | 22 | 1 | 9 | 4 | 1 | 74 | 9 | 1 | 7 | 8 | 1 | 84 | 16 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 43 | 7 | 6 | 7 | 9 | ... | 72 | 12 | 1 | 8 | 4 | 3 | 85 | 15 |
| 13 | Bijápur ... ... ... ... | 52 | 10 | ... | 8 | 1 | ... | 71 | 9 | ... | 13 | 6 | 1 | 80 | 20 |
| 14 | Dhárwár ... ... ... | 29 | ... | 7 | 13 | 8 | ... | 57 | 11 | 1 | 24 | 4 | 3 | 69 | 31 |
| | Average ... | 42 | 6 | 4 | 9 | 6 | ... | 67 | 10 | 1 | 15 | 5 | 2 | 78 | 22 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 64 | ... | 22 | ... | 86 | 8 | 1 | ... | 4 | 1 | 95 | 5 |
| 16 | Kolába ... ... ... ... | ... | ... | 53 | ... | 37 | ... | 90 | 7 | 1 | ... | 2 | ... | 98 | 2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 28 | ... | 58 | ... | 86 | 7 | 2 | ... | 3 | 2 | 95 | 5 |
| 18 | Kánara ... ... ... ... | ... | ... | 78 | ... | 4 | ... | 82 | 3 | 10 | ... | ... | 5 | 95 | 5 |
| | Average ... | ... | ... | 52 | ... | 34 | ... | 86 | 6 | 3 | ... | 3 | 2 | 95 | 5 |
| | Average A. ... | 34 | 15 | 7 | 8 | 7 | 1 | 72 | 9 | 1 | 11 | 6 | 1 | 82 | 18 |
| | **B.—Sind.** | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | 19 | 7 | 45 | 7 | ... | 2 | 80 | 6 | 6 | 1 | 5 | 2 | 92 | 8 |
| 20 | Hyderabad ... ... ... | 15 | 32 | 23 | 4 | ... | ... | 74 | 2 | 1 | 9 | 10 | 4 | 77 | 23 |
| 21 | Shikárpur ... ... ... | 33 | 2 | 23 | 17 | ... | ... | 75 | 8 | 2 | 1 | 13 | 1 | 85 | 15 |
| 22 | Upper Sind Frontier ... | 41 | 3 | 4 | 8 | ... | ... | 56 | 4 | 1 | ... | 39 | ... | 61 | 39 |
| 23 | Thar and Párkar ... ... | 1 | 58 | 23 | 5 | ... | ... | 87 | 1 | ... | 3 | 8 | 1 | 88 | 12 |
| | Average B. ... | 21 | 20 | 25 | 9 | ... | 1 | 76 | 4 | 2 | 4 | 12 | 2 | 82 | 18 |
| | Average for the Presidency... | 33 | 16 | 8 | 8 | 6 | 1 | 72 | 9 | 1 | 10 | 7 | 1 | 82 | 18 |

*B.—Percentages of Food and other Crops on the gross area under each in the Presidency Proper.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food crops. | Non-food crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 3·8 | 6·0 | 1·6 | 8·8 | 3·4 | 17·2 | 4·8 | 4·5 | 3·8 | 13·3 | 2·7 | 1·9 | 4·7 | 9·0 |
| 2 | Kaira ... ... ... | 0·8 | 5·9 | 5·1 | 1·5 | 9·9 | 5·0 | 3·3 | 2·9 | 4·4 | 0·3 | 0·9 | 6·5 | 3·3 | 1·0 |
| 3 | Panch Mahále ... ... ... | ... | 1·1 | 3·0 | ... | 2·9 | 40·7 | 1·3 | 0·9 | 0·5 | ... | 1·2 | 1·0 | 1·3 | 0·5 |
| 4 | Broach ... ... ... ... | 1·9 | 0·5 | 1·0 | 0·8 | 0·5 | ... | 1·3 | 1·9 | 10·1 | 9·6 | 0·9 | 0·8 | 1·5 | 6·0 |
| 5 | Surat ... ... ... ... | 1·6 | 0·3 | 5·9 | 0·6 | 3·2 | 0·2 | 1·7 | 1·9 | 3·7 | 3·4 | 1·3 | 1·0 | 1·7 | 2·5 |
| | Total ... | 8·1 | 13·8 | 16·6 | 11·7 | 19·9 | 63·1 | 12·4 | 12·1 | 22·5 | 26·6 | 7·0 | 11·2 | 12·5 | 19·0 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 6·3 | 15·7 | 1·7 | 16·9 | 1·5 | 1·5 | 8·4 | 8·2 | 5·2 | 34·7 | 10·9 | 10·5 | 8·4 | 25·0 |
| 7 | Násik ... ... ... ... | 2·0 | 15·9 | 3·0 | 18·2 | 11·2 | 3·0 | 7·9 | 8·9 | 7·8 | 0·6 | 13·6 | 2·6 | 8·0 | 5·0 |
| 8 | Ahmadnagar ... ... ... | 16·9 | 10·9 | 0·6 | 13·3 | 2·3 | 4·8 | 12·2 | 9·1 | 5·2 | 0·9 | 10·9 | 4·1 | 11·7 | 4·5 |
| 9 | Poona ... ... ... ... | 10·0 | 15·9 | 3·9 | 5·7 | 5·3 | 6·5 | 9·7 | 7·8 | 11·9 | ... | 9·6 | 5·2 | 9·5 | 3·6 |
| 10 | Sholápur ... ... ... | 16·8 | 4·7 | 1·3 | 2·6 | 0·2 | 9·9 | 9·5 | 6·9 | 4·2 | 0·3 | 15·2 | 8·4 | 9·1 | 5·8 |
| 11 | Sátára ... ... ... ... | 7·4 | 13·0 | 2·6 | 3·3 | 8·1 | 7·8 | 7·7 | 13·6 | 9·8 | 0·2 | 7·4 | 12·1 | 8·4 | 3·5 |
| | Total ... | 59·4 | 76·1 | 13·1 | 59·1 | 28·6 | 33·5 | 55·4 | 54·5 | 44·1 | 36·7 | 67·6 | 42·9 | 55·1 | 47·4 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 8·9 | 3·0 | 6·9 | 6·0 | 9·2 | 3·1 | 7·1 | 8·7 | 8·3 | 5·6 | 5·2 | 13·6 | 7·3 | 6·0 |
| 13 | Bijápur ... ... ... ... | 16·5 | 7·0 | 0·6 | 9·9 | 1·8 | 0·3 | 10·6 | 10·3 | 2·6 | 12·9 | 10·8 | 5·4 | 10·5 | 11·7 |
| 14 | Dhárwár ... ... ... | 7·1 | 0·1 | 9·4 | 13·3 | 9·4 | ... | 6·7 | 9·8 | 6·0 | 18·2 | 6·3 | 18·2 | 7·0 | 14·2 |
| | Total ... | 32·5 | 10·1 | 16·9 | 29·2 | 20·4 | 3·4 | 24·4 | 28·8 | 16·9 | 36·7 | 22·3 | 37·2 | 24·8 | 31·9 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 20·7 | ... | 6·6 | ... | 2·5 | 1·8 | 2·5 | ... | 1·4 | 2·1 | 2·4 | 0·6 |
| 16 | Kolába ... ... ... ... | ... | ... | 12·5 | ... | 7·8 | ... | 1·8 | 1·1 | 0·9 | ... | 0·5 | 0·3 | 1·8 | 0·2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 8·8 | ... | 16·3 | ... | 2·4 | 1·5 | 4·1 | ... | 1·2 | 2·9 | 2·3 | 0·6 |
| 18 | Kánara ... ... ... ... | ... | ... | 11·4 | ... | 0·4 | ... | 1·1 | 0·2 | 9·0 | ... | ... | 3·4 | 1·1 | 0·3 |
| | Total ... | ... | ... | 53·4 | ... | 31·1 | ... | 7·8 | 4·6 | 16·5 | ... | 3·1 | 8·7 | 7·6 | 1·7 |
| | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

60. **Outturn of Crops.**—The tendency to underestimate the anna valuation of the outturn has been noticed in former reports. The anna valuation returned this year also does not show much improvement in this respect.

*Approximate Anna Valuation of Crops in each District, 1888-89.*

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Rági. | Vari. | Tur. | Gram. | Cotton. |
| | *I.—Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... ... | 8 | 10 | 2 | 10 | 5 | 6 | 9 | 3 | 8 | 9 |
| 2 | Kaira ... ... ... ... ... | 7 | 14 | 3 | 11 | 9 | 5 | 8 | 7 | 5 | 12 |
| 3 | Panch Mahále ... ... ... | Maize. 14 | 13 | 3 | 2 | 7 | 5 | 5 | 6 | 3 | 7 |
| 4 | Broach ... ... ... ... ... | 13 | 14 | 6 | 5 | 4 | 8 | ... | 7 | 2 | 12 |
| 5 | Surat ... ... ... ... ... | 13 | 13 | 5 | 3 | 3 | 4 | 2 | 7 | 3 | 8 |
| | *II.—Deccan.* | | | | | | | | | | |
| 6 | Khándesh ... ... ... ... | 11 | 13 | ... | 9 | ... | 5 | ... | ... | 8 | 15 |
| 7 | Násik ... ... ... ... ... | 9 | 10 | 11 | 11 | ... | 11 | 11 | 8 | 11 | 8 |
| 8 | Ahmadnagar ... ... ... ... | 10 | 8 | 10 | 11 | 2 | 11 | 10 | 7 | 8 | 3 |
| 9 | Poona ... ... ... ... ... | 9 | 12 | 14 | 14 | 15 | 11 | 10 | 11 | 12 | 5 |
| 10 | Sholápur ... ... ... ... | 11 | 3 | 6 | 11 | 3 | 8 | 3 | 8 | 9 | 3 |
| 11 | Sátára ... ... ... ... ... | 10 | 8 | 10 | 10 | 7 | 12 | 9 | 8 | 10 | ... |
| | *III.—Karnátak.* | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 6 | 4 | 12 | 8 | ... | 5 | 6 | 8 | 6 | 9 |
| 13 | Bijápur ... ... ... ... ... | 11 | 9 | 7 | 10 | ... | ... | ... | 8 | 10 | 10 |
| 14 | Dhárwár ... ... ... ... | 8 | 6 | 13 | 8 | 9 | 7 | 8 | 5 | 9 | 10 |
| | *IV.—Konkan.* | | | | | | | | | | |
| 15 | Thána ... ... ... ... ... | ... | ... | 13 | ... | 7 | 11 | 5 | 12 | 9 | ... |
| 16 | Kolába ... ... ... ... ... | ... | ... | 9 | ... | 7 | 8 | 8 | 8 | 13 | ... |
| 17 | Ratnágiri ... ... ... ... | ... | ... | 15 | ... | 8 | 11 | 12 | 12 | 11 | ... |
| 18 | Kánara ... ... ... ... ... | ... | ... | 13 | ... | 5 | 8 | 6 | 7 | 6 | ... |

*Note.*—In the above table the valuations are calculated on the standard by which 16 annas represent an average crop.

The season was particularly unfavourable for bájri in the Deccan and Karnátak, and for rice in Gujarát. Both jowári and bájri were fair crops in Gujarát and Khándesh; in the Deccan and Karnátak, though jowári promised an excellent harvest in the beginning, the outturn was much reduced by the deficiency of late rains. Rice was almost a failure in Gujarát; in the Konkan and near the Gháts it yielded a fair outturn. The coarse grains comparatively gave a better outturn. Wheat was a poor crop in South Gujarát for want of sufficient moisture, but in the Deccan the outturn was very fair. Cotton was a full average crop in Khándesh, and a fair crop in Gujarát and Karnátak. In the Deccan proper the cotton crop suffered much in outturn by the deficient early rains, but here its cultivation is confined to a very limited area.

| | Thousands. |
|---|---|
| Mango ... ... ... | +131 |
| Cocoanut ... ... ... | +76 |
| Date-palm... ... ... | +55 |
| Toddy-palm ... ... | +13 |
| Jack ... ... ... | +11 |
| Tamarind ... ... ... | +4 |

61. *Fruit-trees.*—The improved registration shows a general increase in the number of fruit-bearing trees. The figures are, however, little better than rough estimates. The distribution of the trees in the several provinces is shown below :—

**Principal Fruit-bearing Trees in thousands, 1888-89.**

| No. | Province. | Mango. | Tamarind. | Jack. | Cocoanut | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|
| 1 | Gujarát ... ... | 486 | 116 | 3 | 6 | 202 | 699 |
| 2 | Deccan ... ... | 741 | 49 | 10 | 3 | 10 | 115 |
| 3 | Karnátak ... ... | 347 | 98 | 18 | 70 | ... | 936 |
| 4 | Konkan ... ... | 406 | 35 | 159 | 1,520 | 83 | 13 |
| | Total ... | 1,980 | 298 | 190 | 1,599 | 295 | 1,763 |

Some districts add to the return a few fruit trees of especial local importance as shown below, but the list is apparently incomplete :—

| Trees and Districts. | Number. | Trees and Districts. | Number. | Trees and Districts. | Number. | Trees and Districts. | Number. |
|---|---|---|---|---|---|---|---|
| *Moha.* | | *Betel-nut.* | | *Keshew-nut.* | | *Ratámbi.* | |
| Kaira ... ... | 119,620 | Thána ... ... | 5,481 | Belgaum ... | 2,492 | Ratnágiri ... | 12,956 |
| Broach .. ... | 605 | Kolába ... ... | 2,488 | Thána ... ... | 5,231 | *Fig.* | |
| Khándesh ... | 45,477 | Ratnágiri ... | 294,877 | Ratnágiri ... | 50,933 | Poona ... | 34,503 |
| Násik ... ... | 3,159 | Kánara ... ... | 6,228,500 | Kánara ... ... | 89,426 | Ahmadnagar . | 3,422 |
| | | *Ráyan.* | | *Hirda.* | | | |
| | | Kaira ... ... | 65,014 | Ahmadnagar ... | 12,772 | | |
| | | Broach ... ... | 554 | | | | |

**Return No. IV.—Irrigation.**

62. The net irrigated area amounts to 3·41 per cent. of the net cropped area in the Presidency Proper and 99·32 per cent. in Sind. The irrigated area in the Presidency Proper shows a rise of 62,000 acres or 8·05 per cent., 11,000 acres being in the canal area and 51,000 in the area irrigated from wells, tanks and other sources. The area irrigated from canals shows a general increase, except in North Gujarát where the decrease is attributed to the short supply of water in the irrigation canals owing to scanty rainfall. The area irrigated from wells and tanks shows a considerable rise which is due to the fact that artificial irrigation was extensively resorted to to supply the deficiency of rain water. This is particularly noticeable in Ahmadabad and Kaira. The irrigated area rose from 64 to 81 thousand acres or 26·56 per cent. in Ahmadabad, and from 40 to 50 thousand acres or 25 per cent. in Kaira. The Collector of Ahmadabad remarks: "It is so far satisfactory as showing that the cultivators were not backward in raising what crops they could by artificial means

| | Canal. | Other sources. |
|---|---|---|
| | Thousand Acres. | |
| Ahmadabad ... | −2 | +17 |
| Kaira ... ... | −9 | +10 |
| Khándesh ... | +4 | +4 |
| Násik ... ... | ... | +5 |
| Ahmadnagar ... | +6 | +14 |
| Poona ... ... | +13 | −13 |
| Sholápur... ... | +3 | −1 |
| Sátára ... ... | +2 | +1 |
| Belgaum ... ... | ... | +5 |
| Dhárwár... ... | +1 | +20 |
| Kánara ... ... | ... | −13 |

when the natural means failed. It is hoped that the revision survey which has abolished the well-cess and substituted for it a light sub-soil rate per acre and the liberal advance rules, will be the means in course of time of rendering the district famine proof by inducing the rayats to dig wells wherever good water is to be found." Poona and Kánara are the only exceptions where the area irrigated from wells and other sources was considerably reduced; but in the former district there was a corresponding rise in the area irrigated from canals. In Kánara the decrease is generally attributed to deficient water-supply in tanks and wells and to the correction of an error.

63. Among irrigated crops a decrease of 15·05 per cent. in rice is chiefly found in Ahmadabad (19,300), Kaira (6,400) and Kánara (12,700), while Dhárwár shows a rise of 18,700 acres. Irrigated wheat in Ahmadabad rose from 18 to 40 thousand acres, *i. e.* the area more than doubled during the year. Other cereals and pulses show a large increase in Ahmadabad (12,000), Ahmadnagar (9,200), Sholápur (9,500) and Násik (4,100), while Poona gives a decrease of 4,500 acres. In sugarcane, the increase is notably large in Dhárwár (2,800), Belgaum (2,600), Sátára (1,800) and Poona (1,700), while Ahmadabad and Kaira each shows a decrease of about a thousand acres (*vide* remarks above under sugarcane in Return No. 3 as regards the variations).

| | Thousand Acres. |
|---|---|
| Rice ... ... ... ... | −25 |
| Wheat... ... ... ... | +24 |
| Other cereals and pulses ... | +33 |
| Sugarcane ... ... ... | +7 |
| Other food crops ... ... | +19 |
| Non-food crops ... ... | −7 |

**Return No. V.—Agricultural Stock.**

64. The enumeration of agricultural stock is for obvious reasons necessarily faulty in many respects. No general deductions can safely be made till the system of registration is perfected. In Sind the stock is not enumerated at all.

65. *Cattle.*—The total number of cattle shows a fall of 94,000 or 1·14 per cent. Seven districts show a considerable fall, and five districts a considerable rise. The decrease in the Deccan and Gujarát is generally attributed to scarcity of fodder and grazing, owing to which cattle were partly removed to localities with better pastures; some, mostly the less useful stock, died of starvation, especially in parts of Násik; and sales were also effected in much larger number than usual. Some decrease is also due to the prevalence of cattle disease which was of a severe type, especially in Khándesh, Ahmadnagar, Surat and Ratnágiri. No explanation has been furnished for the decrease in Thána. The increase is notably large in the Karnátak. It is not real. It is partly attributed to improved enumeration. In Bijápur and Belgaum the increase is chiefly confined to milch cattle and young stock, and in Dhárwár to the latter alone.

| *Decrease.* | Thousands. |
|---|---|
| Násik ... ... ... | −52 |
| Khándesh ... ... ... | −39 |
| Ratnágiri ... ... ... | −35 |
| Ahmadnagar ... .. | −32 |
| Thána ... ... ... | −17 |
| Ahmadabad ... ... | −9 |
| Surat ... ... ... | −8 |
| *Increase.* | |
| Bijápur ... ... ... | +48 |
| Kolába ... ... ... | +14 |
| Dhárwár ... ... ... | +13 |
| Belgaum ... ... ... | +12 |
| Sátára ... ... ... | +7 |
| Kaira ... ... ... | +7 |

The classification of cattle under the revised sub-heads has not yet become quite familiar to the village accountants. The variations under several sub-heads in some cases are therefore due to improvement in enumeration. For instance, in Thána, the breeding bulls show a fall from 2,741 to 897, which is due to the faulty enumeration of the previous year. Plough cattle show a general decrease, except in Bijápur where the increase of about 4,900 is attributed to the increased area taken up for tillage during the year. Milch cattle and young stock show a considerable increase in the Karnátak as noticed above: elsewhere there is a general decrease under these heads.

66. *Sheep and Goats.*—Sheep number 20¼ lákhs and goats 11½ lákhs, *i. e.*, the former are returned nearly double of the latter. It is a noticeable fact that in all districts, except Khándesh, the sheep are found in a much larger number

than the goats. In the Konkan, on the other hand, which is, however, not the home of these animals, goats seem to thrive better than sheep. Sheep during the year show a decrease of 106,000 or 4·98 per cent., while goats give an increase of 56,000 or 5·10 per cent. The variations are shown in the margin. The decrease in sheep is notably large in Násik, Ahmadnagar and Sholápur, while Bijápur, Sátára and Dhárwár show a considerable increase. The decrease in Ahmadnagar in sheep is partly counterbalanced by the large increase in goats. In Khándesh where these animals are also found in a large number, the variations both in sheep and goats are very small and need no notice.

| | Sheep. | Goats. |
|---|---|---|
| | Thousands. | |
| Násik ... ... | −33 | −12 |
| Ahmadnagar ... | −47 | +28 |
| Poona ... ... | −9 | +3 |
| Sholápur ... ... | −21 | −3 |
| Sátára ... ... | +12 | −3 |
| Belgaum ... ... | −4 | +5 |
| Bijápur ... ... | +18 | −2 |
| Dhárwár ... ... | +9 | −1 |
| Ahmadabad... ... | ... | +5 |
| Surat ... ... | +1 | +5 |

*Ploughs* show an increase of 1,500 in small, and a decrease of 4,100 in large ploughs. The decrease in large ploughs is notable in Ahmadnagar (3,100) and Sholápur (1,500), while Bijápur gives an increase of 1,300.

*Carts.*—Both the riding and load carts show an increase of 3 and 5 thousands respectively. In load carts there is a considerable increase in Bijápur (1,033) and Dhárwár (777), which is attributed to the increased railway traffic.

### B.—RAINFALL.

Season in 1888-89.

67. The statistics of rainfall for each district have been summarized in full detail in Appendix. The following table gives the rainfall at each district head-quarters for the year 1888 and compares it with the previous year 1887 and the average of eleven years ending 1886. The rainfall at the district head-quarters is not necessarily a true index of the general features of the whole district, especially in the capricious tracts of the Deccan and Karnátak, but it at any rate gives a fairly correct idea as regards the general range of the rainfall in the Presidency:—

*Rainfall at District Head-quarters.*

| No. | | District Head-quarters. | Annual Rainfall ending 31st December. Average of eleven years ending 1886. Inches. | 1887. Fall. Inches. | 1887. Rainy days. | 1888. Fall. Inches. | 1888. Rainy days. |
|---|---|---|---|---|---|---|---|
| 1 | Deccan. | Dhulia (Khándesh) ... ... | 25·79 | 40·33 | 72 | 18·54 | 54 |
| 2 | | Násik ... ... ... ... | 33·74 | 33·55 | 98 | 19·99 | 84 |
| 3 | | Ahmadnagar ... ... ... | 25·11 | 23·34 | 77 | 19·26 | 61 |
| 4 | | Poona ... ... ... ... | 31·06 | 32·45 | 80 | 34·02 | 90 |
| 5 | | Sholápur ... ... ... | 33·33 | 39·30 | 83 | 25·81 | 64 |
| 6 | | Sátára ... ... ... ... | 40·84 | 46·95 | 112 | 51·82 | 123 |
| 7 | Karná-tak. | Belgaum ... ... ... | 46·80 | 52·67 | 135 | 45·81 | 134 |
| 8 | | Bijápur ... ... ... | 26·79 | 22·43 | 99 | 21·92 | 102 |
| 9 | | Dhárwár ... ... ... | 32·95 | 36·64 | 100 | 33·34 | 115 |
| 10 | Konkan. | Kárwár (Kánara) ... ... | 116·62 | 141·81 | 130 | 133·93 | 121 |
| 11 | | Ratnágiri ... ... ... | 100·73 | 106·19 | 131 | 85·37 | 103 |
| 12 | | Alibág (Kolába) ... ... | 84·79 | 113·11 | 119 | 75·55 | 99 |
| 13 | | Thána ... ... ... ... | 99·12 | 103·04 | 108 | 87·16 | 105 |
| 14 | Gujará't. | Surat ... ... ... ... | 44·06 | 39·63 | 74 | 29·49 | 61 |
| 15 | | Broach ... ... ... ... | 44·21 | 34·21 | 68 | 18·96 | 47 |
| 16 | | Kaira ... ... ... ... | 37·13 | 48·27 | 75 | 20·06 | 44 |
| 17 | | Godhra (Panch Maháls) ... | 43·24 | 48·54 | 77 | 25·08 | 54 |
| 18 | | Ahmadabad ... ... ... | 29·92 | 25·24 | 50 | 14·76 | 29 |

68. The rainfall of 1888 was generally below the average in the Deccan and North Konkan, much below the average in Gujarát, and up to the average in the South Konkan and Karnátak. The monsoon broke on the Kánara Coast on 2nd

June and travelled over the Deccan and Karnátak by 4th—7th, generally in light showers. In North Gujarát it hardly appeared before 24th June.

In the Deccan the full sowing rain came in Árdra in the second half of June, in Khándesh and the western tracts bordering on the Sahyádris; in the east the kharíf sowing rain was very deficient and sowings were incomplete in many parts. The rainfall of July and August, though moderate, was sufficient and seasonable for rice and other kharíf crops in the west, but badly deficient in the east, particularly in Násik and Ahmadnagar, where standing kharíf withered where sown, and scarcity of fodder was seriously felt. The needed relief came in Uttara and Hast in September. The rainfall was very heavy in the east which mostly depends on the rabi crops. Rabi was sown to the full extent, but the outturn of rabi, owing to insufficient moisture from the late rains, was generally below the average. In the west, the kharíf gave a fair yield. Cotton—the most important staple—was a full average crop in Khándesh.

In the Karnátak, the kharíf rain was, as in the Deccan, sufficient and seasonable towards the Sahyádris in west, but very deficient in the east. The Uttara and Hast rains in September were, however, much heavier than in the Deccan, and cotton and other rabi crops were sown to the full extent. The kharíf in the west gave a fair outturn, and the rabi was, also, on the whole, a fair crop, though, in Bijápur, the season, owing to insufficient moisture in October, was less favourable than in the previous two years.

In the Konkan the rainfall until August was quite sufficient and seasonable, and all crops fared well. But the closing rain of Uttara and Hast in September was very deficient, particularly in the North Konkan. The early crops escaped uninjured generally, but the late crops, especially those sown in salt land, suffered most and gave a poor outturn.

In Gujarát the kharíf sowings, though begun late, were favourably completed in July, and the crops fared well up to August. The closing rain in Uttara and Hast in September was almost absent throughout, and all standing crops suffered more or less. Rice, except where helped by irrigation, gave a very poor yield. But the jowári and other kharíf crops were revived by the cyclonic showers which fortunately came early in November. This fall also allowed the rabi sowings, though the area under rabi was not as full as in ordinary years.

*Relief Measures.*—In view of the anticipated distress from the failure of the closing rains, relief works on a small scale, chiefly road-making and channel-digging, were sanctioned in all districts of Gujarát. The prospects of the season, however, having been improved by the cyclonic fall of November, and the fruit crops—mango, ráyan and mahuda—having given an abundant harvest, especially in Kaira and Panch Maháls, the need for such relief works was not much felt, and the works, where opened, were not largely resorted to by the labouring classes, except in parts of Ahmadabad and in the Bára or sea-side villages of Broach where the distress was apparently greater.

Season, 1889-90.

69. The monthly rainfall returns have been regularly published in the *Government Gazette.* These show that the kharíf rain was generally seasonable and sufficient in Gujarát, Konkan, and West Deccan and Karnátak as also in Khándesh. But in the eastern tracts away from the Gháts in the Deccan and Karnátak, which depend chiefly on rabi, the rainfall was very deficient, much of the kharíf area remained unsown, and cattle suffered in many parts from the scarcity of fodder and drinking water. Here, however, excellent rain fell in September, removing all anxiety, and it is hoped that full area will be sown with rabi. The latest reports show that the cyclonic rain which fell on 15th—18th of October was abnormally heavy in many parts of the Deccan and Karnátak, being injuriously excessive for standing kharíf and necessitating re-sowing of rabi in some places. The season, as far as the rainfall is concerned, promises to be a good one all over the Presidency, and is indeed far better than that of the last year in many parts.

## C.—CROP EXPERIMENTS.

70. The number of crop experiments conducted in 1888-89 was 63, as shown in the margin, against 58 in 1887-88. A separate report will be submitted to Government regarding these experiments.

Jowári 10, wheat 12, gram 9, rice 8, bájri 7, kardai 6, cotton 3, sugarcane and vál, 2 each, and linseed, potato, bávto and maize 1 each;—total 63.

## VIII.—TRADE AND TRADE STATISTICS.

71. The review on the report of the Rail and Road-borne Trade of the Presidency for 1888-89 has been separately submitted to Government. During the year the total rail-borne trade was registered as shown below :—

*Trade in thousands of cwt.*

| Year. | External Trade. | | Local Trade. | Total Trade. |
|---|---|---|---|---|
| | Imports. | Exports. | | |
| 1887-88* ... ... ... ... ... | 23,448 | 9,115 | 30,390 | 62,953 |
| 1888-89 ... ... ... ... ... | 32,380 | 9,083 | 29,185 | 70,648 |
| Increase or Decrease ... | +8,932 | −32 | −1,205 | +7,695 |

* Exclusive of the trade in railway plant, which was not registered in 1888-89 under the revised system.

The increase, which is confined to imports, covers the abnormal fall in the previous year. The export is almost stationary, and there is a slight fall in the local trade. The road-borne trade was registered at six selected *nákas* or posts as noted in last report.

## IX.—ARCHÆOLOGY.

72. No reports on the subject have been received from the district officers under Government Resolution No. 1672, dated 13th April 1889, General Department.

## CONCLUSION.

73. In addition to the usual statistical work which had to be done during the year, this Department had to submit special reports on subjects referred to it by the Government of India. Such reports comprised notes and statements showing the progress of cotton cultivation and cotton consumption in the Presidency, information regarding minerals, and details of certain economic products to be described in the Third Volume of the Dictionary of the Economic Products of India.

74. During the year under report the subject of instituting a diploma in agriculture in the Faculty of Engineering was brought on for discussion before the Senate of the Bombay University on the 24th and 25th September. The motion was carried after a lengthy debate, by a very large majority, 45 members voting in favour and 15 against it. Some technical difficulties have yet to be overcome before the measure receives the final sanction of the University. If the diploma proposal is negatived, it is to be hoped that the Senate will agree to the institution of a degree in agriculture. Such a stimulus to the study of scientific agriculture is all the more necessary in view of the important problems which are presented to Government in connection with the economic condition of the country. For instance, it is well known that population is increasing, that attempts at inducing people to emigrate have been unsuccessful, that the limit of culturable area has been nearly reached, that produce, such as wheat and some of the important oil-seeds now largely and regularly exported every year to Europe, has been supplanting the area formerly occupied by food-grains, that the productive powers of the soil have become less effective, that the land is allowed little or no rest, that the system of rotation which formerly helped in a large degree to promote the recuperative powers of the soil has now been less frequently resorted to, and that all these causes have more or less combined to prevent operations in high farming from being kept in a state of efficiency.

It is not contended that the rayats need familiarising with the system of rotation of crops or of interculture of crops, or that they do not appreciate the benefits of high farming. What is sorely wanted by them is such help as would enable them to utilize the results of science and to adopt such practical methods in agriculture as well-tested experiments have incontestably shown to lead to better results. They have to be made to appreciate, for instance, the advantages arising from the interchange, between the different parts of the country, of best selected seeds for grains, fruits, and vegetables. They have to be afforded the facilities

of irrigation in the raising of superior crops, single or double, or to be taught the benefits arising from a more frequent resort to mixtures in cultivation as protective make-shifts in seasons of drought and famine and for safety against the caprices of season, or against continuous bad seasons. The interculture in cotton lands, for instance, of cotton in bad seasons with rabi crops, such as wheat, linseed, and gram is not only found useful as a good protective make-shift, but more paying in its results than the plan of ploughing up the soil with cotton alone. A knowledge, again, of the diseases of crops protects the cultivators against losses in money and labour. The ravages of a rice grub are well known. The young rice, attacked by the grub, grows up high and apparently strong, but the ear never fills and turns white, and in the centre of the plant is found a small grub, about half an inch long, of a yellowish white colour. The rice crop in some villages of the Thána district was destroyed by this grub for three years in succession. Again, it is to be noted that this Department has introduced experiments and methods of cultivation which have enabled most useful crops to be grown in greater abundance than had been the case before. But, unless the results of well-tested and clearly demonstrated experiments on model farms, on which thousands of rupees are expended by Government, are utilized by men practically trained in scientific methods of agriculture and adopted extensively through the instrumentality of such men by the cultivators of the soil, the objects aimed at by the Agricultural Department in maintaining agricultural operations in the highest attainable state of efficiency can scarcely be carried out, and the country can hardly benefit by the labours of the Department.

It is scarcely necessary here to refer at any length to the well-known ráb controversy. The Forest Department maintained that the use of brushwood for ráb was unnecessary and that the people had no "right" to denude the hills by lopping the trees and bushes, and that "the permissive privilege" should be denied to them. On the other hand, the Revenue officers held that the ráb of brushwood was absolutely necessary in certain districts to produce good rice and other crops. As this question was intimately connected with the revenue settlement of the Konkan districts, Government directed careful experiments to be made to ascertain what the truth was. These experiments were conducted for three years, but they proved nothing, owing to a want of technical knowledge on the part of the experimenters. At last, when Mr. Ozanne became Director of Agriculture, the question was referred to him, and he settled it after a series of experiments conducted on scientific principles for two years and a careful study of the whole subject. No one who is acquainted with the agricultural requirements of this country on the one hand and the progress of modern agricultural science on the other will deny that a body of experts in scientific agriculture are as much needed in the interest of the people to interpret aright the laws of nature as lawyers are in request to explain the intricacies of law.

75. I cannot close the report without expressing my obligations to Mr. Ozanne, who, though now serving in the Baroda State, has not ceased to evince interest in the work of this Department, and has readily given me the benefit of his experience whenever I had occasion to consult him in technical matters. To Ráv Bahádur Ichchhárám Bhagvándás, B.A., Personal Assistant, to Mr. Yashvant Nilkanth, Superintendent, and to the whole office Establishment my thanks are due for the hard work they have cheerfully done during the year.

I have the honour to be,

Sir,

Your most obedient Servant,

BHIMBHA'I KIRPA'RA'M,

Offg. Director, Land Records and Agriculture,

Bombay.

# STATISTICS.

## A.—AGRICULTURAL.

I.—Area of Available Statistics.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

III. A.—Details under Khari'f and Rabi Crops.

III. B.—Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1888-89.

| No. | District. | Number and Area of Villages.* | | | | | | Villages for which Statistics are Available. | | | | | | | | Villages for which Statistics are not Available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Surveyed alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. | 832 | 2,319,574 | 52 | 123,518 | 884 | 2,443,092 | 448 | 1,057,423 | 334 | 1,262,151 | 36 | 98,917 | 868 | 2,418,491 | .. | .... | 16 | 24,601 | 16 | 24,601 |
| 2 | Kaira .. .. .. .. | 563 | 994,259 | 28 | 27,464 | 591 | 1,021,723 | 436 | 757,836 | 91 | 177,131 | .. | .... | 527 | 934,967 | 36 | 59,292 | 28 | 27,464 | 64 | 86,756 |
| 3 | Panch Mahâls .. .. .. | 610½ | 900,589 | 139½ | 127,418 | 750 | 1,028,007 | 402 | 625,664 | 149½ | 198,199 | 32 | 42,652 | 583½ | 866,455 | 59 | 76,786 | 107½ | 84,766 | 166½ | 161,552 |
| 4 | Broach .. .. .. .. | 408 | 917,756 | 15 | 18,724 | 423 | 936,480 | 407 | 916,577 | 1 | 1,179 | .. | .... | 408 | 917,756 | .. | .... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat .. .. .. .. | 820½ | 1,026,662 | 32½ | 31,055 | 853 | 1,057,717 | 810½ | 1,014,427 | 10 | 12,235 | 4½ | 5,255 | 825 | 1,031,917 | .. | .... | 28 | 25,800 | 28 | 25,800 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. | 3,223 | 5,475,811 | 111½ | 210,302 | 3,334½ | 5,686,113 | 2,676½ | 4,620,153 | 210 | 391,122 | 63½ | 108,524 | 2,950 | 5,119,799 | 336½ | 464,536 | 48 | 101,778 | 384½ | 566,314 |
| 7 | Násik .. .. .. .. | 1,512 | 3,420,568 | 184 | 299,559 | 1,696 | 3,720,127 | 1,500 | 3,395,306 | .. | .... | 80 | 168,073 | 1,580 | 3,563,379 | 12 | 25,262 | 104 | 131,486 | 116 | 156,748 |
| 8 | Ahmadnagar .. .. .. | 1,223 | 3,673,540 | 151 | 550,874 | 1,374 | 4,224,414 | 1,223 | 3,673,540 | .. | .... | 109½ | 444,552 | 1,332½ | 4,118,092 | .. | .... | 41½ | 106,322 | 41½ | 106,322 |
| 9 | Poona .. .. .. .. | 1,002¾ | 2,869,703 | 201¼ | 506,843 | 1,204 | 3,376,546 | 999¾ | 2,868,052 | .. | .... | 160¼ | 469,077 | 1,160 | 3,337,129 | 3 | 1,651 | 41 | 37,766 | 44 | 39,417 |
| 10 | Sholápur .. .. .. .. | 665 | 2,697,958 | 52 | 208,332 | 717 | 2,906,290 | 665 | 2,697,958 | .. | .... | 52 | 208,332 | 717 | 2,906,290 | .. | .... | .. | .... | .. | .... |
| 11 | Sátára .. .. .. .. | 960 | 2,456,402 | 394 | 623,824 | 1,354 | 3,080,226 | 960 | 2,456,402 | .. | .... | 265 | 492,597 | 1,225 | 2,948,999 | .. | .... | 129 | 131,227 | 129 | 131,227 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. | 892 | 2,278,757 | 241 | 568,515 | 1,133 | 2,847,272 | 892 | 2,278,757 | .. | .... | 183 | 540,390 | 1,075 | 2,819,147 | .. | .... | 58 | 28,125 | 58 | 28,125 |
| 13 | Bijápur .. .. .. .. | 1,011 | 3,205,682 | 162 | 422,008 | 1,173 | 3,627,690 | 1,011 | 3,205,682 | .. | .... | 155 | 395,537 | 1,166 | 3,601,219 | .. | .... | 7 | 26,471 | 7 | 26,471 |
| 14 | Dhárwár .. .. .. .. | 1,289 | 2,689,252 | 184 | 256,567 | 1,473 | 2,945,819 | 1,288 | 2,688,087 | 1 | 1,165 | 137 | 180,872 | 1,426 | 2,870,124 | .. | .... | 47 | 75,695 | 47 | 75,695 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | 1,880 | 2,398,611 | 104 | 117,136 | 1,984 | 2,515,747 | 1,861 | 2,378,029 | 5 | 3,847 | 28 | 33,974 | 1,894 | 2,415,850 | 14 | 16,735 | 76 | 83,162 | 90 | 99,897 |
| 16 | Kolába .. .. .. .. | 1,264 | 1,103,410 | 80 | 30,461 | 1,344 | 1,133,871 | 763 | 571,562 | 499 | 531,759 | 6 | 3,466 | 1,268 | 1,106,787 | 2 | 89 | 74 | 26,995 | 76 | 27,084 |
| 17 | Ratnágiri .. .. .. .. | 1,271½ | 2,393,308 | 62 | 109,345 | 1,333½ | 2,502,653 | 58 | 133,201 | 935½ | 1,616,961 | 17 | 33,723 | 1,010½ | 1,783,885 | 273 | 643,146 | 45 | 75,622 | 323 | 718,768 |
| 18 | Kánara .. .. .. .. | 1,373 | 2,435,436 | .. | .... | 1,373 | 2,435,436 | 1,269 | 2,352,756 | .. | .... | .. | .... | 1,269 | 2,352,756 | 104 | 82,680 | .. | .... | 104 | 82,680 |
| | Total A. ... | 20,800¼ | 43,257,278 | 2,193¾ | 4,231,945 | 22,994 | 47,489,223 | 17,669¾ | 37,691,352 | 2,286 | 4,195,749 | 1,328¾ | 3,225,941 | 21,284½ | 45,113,042 | 844½ | 1,370,177 | 865 | 1,006,004 | 1,709½ | 2,376,181 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. .. | 831 | 4,982,025 | 14 | 48,460 | 845 | 5,030,485 | 734 | 2,963,490 | 97 | 2,018,535 | 14 | 48,460 | 845 | 5,030,485 | .. | .... | .. | .... | .. | .... |
| 20 | Hyderabad.. .. .. .. | 1,339 | 5,335,278 | 58 | 267,537 | 1,397 | 5,602,815 | 1,204 | 4,085,028 | 135 | 1,250,250 | 58 | 267,537 | 1,397 | 5,602,815 | .. | .... | .. | .... | .. | .... |
| 21 | Shikárpur .. .. .. .. | 1,188 | 4,867,128 | 17 | 279,085 | 1,205 | 5,146,213 | 1,110 | 2,943,189 | 43 | 1,059,430 | 14 | 233,674 | 1,167 | 4,236,293 | 35 | 864,509 | 3 | 45,411 | 38 | 909,920 |
| 22 | Upper Sind Frontier .. .. | 294 | 1,558,644 | 7 | 40,718 | 301 | 1,599,362 | 228 | 661,163 | 1 | 121,002 | 6 | 27,333 | 235 | 809,498 | 65 | 776,479 | 1 | 13,385 | 66 | 789,864 |
| 23 | Thar and Párkar .. .. .. | 70 | 8,475,608 | .. | .... | 70 | 8,475,608 | 57 | 1,861,925 | .. | .... | .. | .... | 57 | 1,861,925 | 13 | 6,613,683 | .. | .... | 13 | 6,613,683 |
| | Total B. ... | 3,722 | 25,218,683 | 96 | 635,800 | 3,818 | 25,854,483 | 3,333 | 12,514,795 | 276 | 4,449,217 | 92 | 577,004 | 3,701 | 17,541,016 | 113 | 8,254,671 | 4 | 58,796 | 117 | 8,313,467 |
| | Grand Total ... | 24,522¼ | 68,475,961 | 2,289¾ | 4,867,745 | 26,812 | 73,343,706 | 21,002¾ | 50,206,147 | 2,562 | 8,644,966 | 1,420¾ | 3,802,945 | 24,985½ | 62,654,058 | 957½ | 9,624,848 | 869 | 1,064,800 | 1,826½ | 10,689,648 |

* Exclusive of Foreign Territory, Feudatory and Tributary States.

# II.—Area, Cultivated and Uncultivated, 1888-89.

| No. | District. | | Total Area as in Columns 5, 6 and 7 of Return No. I. | Cultivated Area. Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. | Add Current Fallows. | Total Columns 5 and 6. | Details of Column 7. Assessed Land. | Unassessed Land. | Uncultivated Area. Available for Cultivation. Assessed Land. | Unassessed Land. | Not available for Cultivation. Forest. | Other. | Total Columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | A.—Bombay Presidency Proper. | | Acres. | | | | | Acres. | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 1,057,423 | 730,752 | 65,642 | 665,110 | 113,144 | 778,254 | 776,493 | 1,761 | 75,123 | 12,177 | 21,855 | 170,014 | 279,169 |
| | | Other Government ... ... | 1,262,151 | 611,925 | 8,080 | 603,845 | 383,717 | 987,562 | 987,436 | 126 | ... | 6,385 | ..... | 268,204 | 274,589 |
| | | Alienated... ... ... ... | 98,917 | 37,155 | 259 | 36,896 | 61,940 | 98,836 | 98,836 | ..... | ... | ..... | ..... | 81 | 81 |
| | | Total ... | 2,418,491 | 1,379,832 | 73,981 | 1,305,851 | 558,801 | 1,864,652 | 1,862,765 | 1,887 | 75,123 | 18,562 | 21,855 | 438,299 | 553,839 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 757,836 | 553,567 | 24,544 | 529,023 | 56,414 | 585,437 | 584,957 | 480 | 71,516 | 1,194 | 39 | 99,650 | 172,399 |
| | | Other Government ... ... | 177,131 | 161,091 | 6,605 | 154,486 | 6,766 | 161,252 | 161,240 | 12 | 478 | 22 | ..... | 15,379 | 15,879 |
| | | Alienated... ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 934,967 | 714,658 | 31,149 | 683,509 | 63,180 | 746,689 | 746,197 | 492 | 71,994 | 1,216 | 39 | 115,029 | 188,278 |
| 3 | Panch Maháls ... | Rayatwári ... ... ... | 625,604 | 207,953 | 4,460 | 203,493 | 48,061 | 251,554 | 249,014 | 2,540 | 95,664 | 125,236 | 111,171 | 41,979 | 374,050 |
| | | Other Government ... ... | 198,199 | 57,629 | 1,037 | 56,592 | 45,594 | 102,186 | 102,144 | 42 | 51,789 | 14,021 | ..... | 30,203 | 96,013 |
| | | Alienated... ... ... ... | 42,652 | 20,707 | 34 | 20,673 | 13,580 | 34,253 | 34,253 | ..... | 2,714 | ..... | ..... | 5,685 | 8,399 |
| | | Total ... | 866,455 | 286,289 | 5,531 | 280,758 | 107,235 | 387,993 | 385,411 | 2,582 | 150,167 | 139,257 | 111,171 | 77,867 | 478,462 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 916,577 | 568,534 | 281 | 568,253 | 75,526 | 643,779 | 636,414 | 7,365 | 27,675 | 2,335 | ..... | 242,788 | 272,798 |
| | | Other Government ... ... | 1,179 | 889 | ..... | 889 | 253 | 1,142 | 1,142 | ..... | ..... | ..... | ..... | 37 | 37 |
| | | Alienated... ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 917,756 | 569,423 | 281 | 569,142 | 75,779 | 644,921 | 637,556 | 7,365 | 27,675 | 2,335 | ..... | 242,825 | 272,835 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 1,014,427 | 462,186 | 6,838 | 455,348 | 269,770 | 725,118 | 723,233 | 1,885 | 35,352 | 29,921 | 43,521 | 180,515 | 289,309 |
| | | Other Government ... ... | 12,235 | 5,146 | 63 | 5,083 | 4,860 | 9,943 | 9,943 | ..... | 409 | 759 | ..... | 1,124 | 2,292 |
| | | Alienated ... ... ... ... | 5,255 | 3,713 | 11 | 3,702 | 1,186 | 4,888 | 4,888 | ..... | 218 | ..... | ..... | 149 | 367 |
| | | Total ... | 1,031,917 | 471,045 | 6,912 | 464,133 | 275,816 | 739,949 | 738,064 | 1,885 | 35,979 | 30,680 | 43,521 | 181,788 | 291,968 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári... ... ... | 4,620,153 | 2,730,752 | 7,885 | 2,722,867 | 286,302 | 3,009,669 | 3,005,071 | 4,598 | 458,436 | 274,230 | 284,444 | 593,374 | 1,610,484 |
| | | Other Government ... ... | 391,122 | 47,347 | ..... | 47,347 | 1,805 | 49,152 | 5,031 | 44,121 | 8 | 141,370 | 195,645 | 4,947 | 341,970 |
| | | Alienated... ... ... ... | 108,524 | 66,989 | 367 | 66,622 | 14,548 | 81,170 | 81,154 | 16 | 9,207 | 6,094 | 753 | 11,300 | 27,354 |
| | | Total ... | 5,119,799 | 2,845,088 | 8,252 | 2,836,836 | 303,155 | 3,139,991 | 3,091,256 | 48,735 | 467,651 | 421,694 | 480,842 | 609,621 | 1,979,808 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 3,395,306 | 1,767,186 | 24,768 | 1,742,418 | 424,539 | 2,166,957 | 2,166,470 | 487 | 120,949 | 35,852 | 759,999 | 311,549 | 1,228,349 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... ... | 168,073 | 104,436 | 1,332 | 103,104 | 21,470 | 124,574 | 124,529 | 45 | 10,457 | 8,876 | 2,299 | 21,867 | 43,499 |
| | | Total ... | 3,563,379 | 1,871,622 | 26,100 | 1,845,522 | 446,009 | 2,291,531 | 2,290,999 | 532 | 131,406 | 44,728 | 762,298 | 333,416 | 1,271,848 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 3,673,540 | 2,304,423 | 28,847 | 2,275,576 | 418,061 | 2,693,637 | 2,693,297 | 340 | 66,119 | 12,883 | 535,491 | 365,410 | 979,903 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... ... | 444,552 | 306,366 | 1,483 | 304,883 | 57,206 | 362,089 | 362,078 | 11 | 13,330 | 2,654 | 394 | 66,085 | 82,463 |
| | | Total ... | 4,118,092 | 2,610,789 | 30,330 | 2,580,459 | 475,267 | 3,055,726 | 3,055,375 | 351 | 79,449 | 15,537 | 535,885 | 431,495 | 1,062,366 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 2,868,052 | 1,805,592 | 62,135 | 1,743,457 | 311,455 | 2,054,912 | 2,054,715 | 197 | 38,590 | 2,145 | 381,968 | 390,437 | 813,140 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... ... | 469,077 | 317,118 | 10,439 | 306,679 | 63,562 | 370,241 | 370,177 | 64 | 2,375 | 77 | 1,253 | 95,131 | 98,836 |
| | | Total ... | 3,337,129 | 2,122,710 | 72,574 | 2,050,136 | 375,017 | 2,425,153 | 2,424,892 | 261 | 40,965 | 2,222 | 383,221 | 485,568 | 911,976 |
| 10 | Sholápur ... | Rayatwári ... ... ... | 2,697,958 | 1,988,655 | 25,574 | 1,963,081 | 316,066 | 2,279,147 | 2,278,705 | 442 | 23,119 | 2,565 | 174,768 | 218,359 | 418,811 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated... ... ... ... | 208,332 | 151,391 | 2,434 | 148,957 | 25,152 | 174,109 | 173,966 | 143 | 201 | 3,853 | ..... | 30,169 | 34,223 |
| | | Total ... | 2,906,290 | 2,140,046 | 28,008 | 2,112,038 | 341,218 | 2,453,256 | 2,452,671 | 585 | 23,320 | 6,418 | 174,768 | 248,528 | 453,034 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Sátára .. | Rayatwári ... ... ... | 2,456,402 | 1,556,992 | 89.232 | 1,467,760 | 303,293 | 1,771,053 | 1,770,501 | 552 | 28,706 | 8,112 | 423,383 | 225,148 | 685,349 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 492,597 | 327,961 | 23,802 | 304,159 | 101,827 | 405,986 | 405,986 | ..... | 466 | 9,784 | 12,636 | 63,725 | 86,611 |
| | | Total ... | 2,948,999 | 1,884,953 | 113,034 | 1,771,919 | 405,120 | 2,177,039 | 2,176,487 | 552 | 29,172 | 17,896 | 436,019 | 288,873 | 771,960 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári ... ... ... | 2,278,757 | 1,441,800 | 28,106 | 1,413,694 | 236,863 | 1,650,557 | 1,650,121 | 436 | 72,395 | 18,556 | 389,858 | 147,391 | 628,200 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 540,390 | 329,952 | 3,763 | 326,189 | 78,640 | 404,829 | 404,716 | 113 | 42,605 | 1,308 | 25,367 | 66,281 | 135,561 |
| | | Total ... | 2,819,147 | 1,771,752 | 31,869 | 1,739,883 | 315,503 | 2,055,386 | 2,054,837 | 549 | 115,000 | 19,864 | 415,225 | 213,672 | 763,761 |
| 13 | Bijápur | Rayatwári ... ... ... | 3,205,682 | 2,401,612 | 5,071 | 2,396,541 | 317,109 | 2,713,650 | 2,713,579 | 71 | 140,329 | 19,575 | 162,452 | 169,676 | 492,032 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 395,537 | 277,765 | 433 | 277,332 | 51,773 | 329,105 | 329,086 | 19 | 13,504 | 578 | 27,060 | 25,290 | 66,432 |
| | | Total ... | 3,601,219 | 2,679,377 | 5,504 | 2,673,873 | 368,882 | 3,042,755 | 3,042,665 | 90 | 153,833 | 20,153 | 189,512 | 194,966 | 558,464 |
| 14 | Dhárwár | Rayatwári ... ... ... | 2,688,087 | 1,971,999 | 35,095 | 1,936,904 | 233,351 | 2,170,255 | 2,170,114 | 141 | 51,466 | 2 | 276,488 | 189,876 | 517,832 |
| | | Other Government ... ... | 1,165 | 351 | ..... | 351 | 96 | 447 | 447 | ..... | 647 | ..... | ..... | 71 | 718 |
| | | Alienated ... ... ... | 180,872 | 109,513 | 1,830 | 107,683 | 30,793 | 138,476 | 138,408 | 68 | 11,443 | 14,838 | ..... | 16,115 | 42,396 |
| | | Total ... | 2,870,124 | 2,081,863 | 36,925 | 2,044,938 | 264,240 | 2,309,178 | 2,308,969 | 209 | 63,556 | 14,840 | 276,488 | 206,062 | 560,946 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... ... ... | 2,378,029 | 513,458 | 5,362 | 508,096 | 473,877 | 981,973 | 972,090 | 9,883 | 45,436 | 118,049 | 424,606 | 807,965 | 1,306,056 |
| | | Other Government ... ... | 3,847 | 1,072 | 7 | 1,065 | 1,059 | 2,124 | 2,124 | ..... | ..... | 1,196 | ..... | 527 | 1,723 |
| | | Alienated ... ... ... | 33,974 | 8,705 | 61 | 8,644 | 9,945 | 18,589 | 18,463 | 126 | 2 | 6,248 | 1,303 | 7,832 | 15,385 |
| | | Total ... | 2,415,850 | 523,235 | 5,430 | 517,805 | 484,881 | 1,002,686 | 992,677 | 10,009 | 45,438 | 125,493 | 425,909 | 816,324 | 1,413,164 |
| 16 | Kolába ... | Rayatwári .. ... ... | 571,562 | 180,290 | 5,091 | 175,199 | 113,431 | 288,630 | 286,989 | 1,641 | 5,702 | 35,871 | 124,962 | 116,397 | 282,932 |
| | | Other Government ... ... | 531,759 | 192,126 | 4,108 | 188,018 | 114,036 | 302,054 | 302,053 | 1 | 152 | 5,240 | 81,113 | 143,200 | 229,705 |
| | | Alienated ... ... ... | 3,466 | 1,153 | 9 | 1,144 | 1,204 | 2,348 | 2,348 | ..... | ..... | 608 | ..... | 510 | 1,118 |
| | | Total ... | 1,106,787 | 373,569 | 9,208 | 364,361 | 228,671 | 593,032 | 591,390 | 1,642 | 5,854 | 41,719 | 206,075 | 260,107 | 513,755 |
| 17 | Ratnágiri | Rayatwári ... ... ... | 133,201 | 42,039 | 4,709 | 37,330 | 44,765 | 82,095 | 82,095 | ..... | 387 | 2,402 | 5,035 | 43,282 | 51,106 |
| | | Other Government ... ... | 1,616,961 | 445,093 | 26,832 | 418,261 | 722,865 | 1,141,126 | 1,141,077 | 49 | 703 | 6,469 | 19,259 | 449,404 | 475,835 |
| | | Alienated ... ... ... | 33,723 | 17,438 | 1,718 | 15,720 | 7,896 | 23,616 | 23,616 | ..... | 6 | 987 | ..... | 9,114 | 10,107 |
| | | Total ... | 1,783,885 | 504,570 | 33,259 | 471,311 | 775,526 | 1,246,837 | 1,246,788 | 49 | 1,096 | 9,858 | 24,294 | 501,800 | 537,048 |
| 18 | Kánara... | Rayatwári ... ... ... | 2,352,756 | 234,629 | 11,427 | 223,202 | 79,969 | 303,171 | 302,292 | 879 | 56,219 | 833,623 | 920,856 | 238,887 | 2,049,585 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,352,756 | 234,629 | 11,427 | 223,202 | 79,969 | 303,171 | 302,292 | 879 | 56,219 | 833,623 | 920,856 | 238,887 | 2,049,585 |
| | Total A. | Rayatwári ... ... ... | 37,691,352 | 21,462,419 | 435,067 | 21,027,352 | 4,122,496 | 25,149,848 | 25,116,150 | 33,698 | 1,413,183 | 1,534,728 | 5,040,896 | 4,552,697 | 12,541,504 |
| | | Other Government ... ... | 4,195,749 | 1,522,669 | 46,732 | 1,475,937 | 1,281,051 | 2,756,988 | 2,712,686 | 44,302 | 54,186 | 175,462 | 296,017 | 913,096 | 1,438,761 |
| | | Alienated ... ... ... | 3,225,941 | 2,080,362 | 47,975 | 2,032,387 | 540,722 | 2,573,109 | 2,572,504 | 605 | 106,528 | 55,905 | 71,065 | 419,334 | 652,832 |
| | | Total ... | 45,113,042 | 25,065,450 | 529,774 | 24,535,676 | 5,944,269 | 30,479,945 | 30,401,340 | 78,605 | 1,573,897 | 1,766,095 | 5,407,978 | 5,885,127 | 14,633,097 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 5,030,485 | 392,506 | 20,532 | 371,974 | 518,361 | 890,335 | 406,077 | 484,258 | 46,181 | 586,003 | 96,333 | 3,411,633 | 4,140,150 |
| 20 | Hyderabad... ... ... ... ... | | 5,602,815 | 753,237 | 9,051 | 744,186 | 1,357,024 | 2,101,210 | 792,272 | 1,308,938 | 371,796 | 1,604,567 | 51,020 | 1,474,222 | 3,501,605 |
| 21 | Shikárpur ... ... ... ... ... | | 4,236,293 | 822,470 | 118,376 | 704,094 | 765,059 | 1,469,153 | 746,504 | 722,649 | 158,673 | 1,644,990 | *269,686 | *693,791 | 2,767,140 |
| 22 | Upper Sind Frontier ... ... ... | | 809,498 | 200,783 | 11,136 | 189,647 | 316,641 | 506,288 | 195,478 | 310,810 | 16,264 | 137,059 | 48,649 | 101,238 | 303,210 |
| 23 | Thar and Párkar ... ... ... ... | | 1,861,925 | 383,282 | ..... | 383,282 | 551,659 | 934,941 | ..... | 934,941 | ..... | 926,984 | ... | ... | 926,984 |
| | | Total B. ... | 17,541,016 | 2,552,278 | 159,095 | 2,393,183 | 3,508,744 | 5,901,927 | 2,140,331 | 3,761,596 | 592,914 | 4,899,603 | 465,688 | 5,680,884 | 11,639,089 |
| | | Grand Total ... | 62,654,058 | 27,617,728 | 688,869 | 26,928,859 | 9,453,013 | 36,381,872 | 32,541,671 | 3,840,201 | 2,166,811 | 6,665,698 | 5,873,666 | 11,566,011 | 26,272,186 |

# III.—Crops, 1888-89.

| No. | District. | | I.—Cereals. Jowári (Great Millet), Sorghum vulgare, &c. | Bájrí (Spiked Millet), Penicillaria spicata. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu), Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Makai), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Eleusine coracana. | Réle, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum miliaceum, P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum pilosum. | Amaranth (Rájgira), Amaranthus frumentaceus. | Others. | Total I. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 171,921 | 132,779 | 22,891 | 82,404 | 26,853 | 4,055 | 11,919 | 9,258 | 244 | 3,016 | 7,810 | ..... | 38 | ..... | 473,188 |
| | | Other Government ... ... | 143,014 | 94,993 | 2,083 | 96,624 | 6,920 | 848 | 7,548 | 435 | 601 | 1,747 | 16,295 | ..... | ..... | ..... | 371,108 |
| | | Alienated ... ... ... | 10,159 | 4,943 | 30 | 4,629 | 329 | 222 | 196 | ..... | ..... | 56 | 630 | ..... | ..... | ..... | 21,194 |
| | | Total ... | 325,094 | 232,715 | 25,004 | 183,657 | 34,102 | 5,125 | 19,663 | 9,693 | 845 | 4,819 | 24,735 | ... | 38 | ... | 865,490 |
| 2 | Kaira ... | Rayatwári ... ... ... | 49,809 | 180,608 | 71,793 | 27,515 | 10,236 | 545 | 76,578 | 51,494 | 445 | 950 | 1,524 | ..... | 199 | 24 | 471,720 |
| | | Other Government ... ... | 15,177 | 48,944 | 9,752 | 3,522 | 466 | 50 | 35,149 | 10,212 | 125 | 680 | 62 | ..... | 71 | ..... | 124,210 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 64,986 | 229,552 | 81,545 | 31,037 | 10,702 | 595 | 111,727 | 61,706 | 570 | 1,630 | 1,586 | ... | 270 | 24 | 595,930 |
| 3 | Panch Maháls... | Rayatwári ... ... ... | 1,797 | 30,778 | 33,566 | 556 | 213 | 71,077 | 13,297 | 10,552 | 13 | 1,865 | 10,492 | 116 | 6 | 1,172 | 175,500 |
| | | Other Government ... ... | 796 | 8,779 | 10,965 | 443 | 26 | 15,793 | 5,312 | 3,405 | ..... | 878 | 3,081 | 243 | ..... | ..... | 49,721 |
| | | Alienated ... ... ... | 302 | 4,499 | 3,971 | ..... | ..... | 4,159 | 1,936 | 1,116 | ..... | 35 | 1,225 | ..... | ..... | ..... | 17,243 |
| | | Total ... | 2,895 | 44,056 | 48,502 | 999 | 239 | 91,029 | 20,545 | 15,073 | 13 | 2,778 | 14,798 | 359 | 6 | 1,172 | 242,464 |
| 4 | Broach ... | Rayatwári ... ... ... | 168,096 | 18,192 | 16,104 | 15,185 | ..... | 20 | 8,182 | 454 | 5 | 369 | ..... | ..... | 6 | 2 | 226,615 |
| | | Other Government ... ... | 203 | 6 | 43 | 6 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 259 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... |
| | | Total ... | 168,299 | 18,198 | 16,147 | 15,191 | ... | 20 | 8,183 | 454 | 5 | 369 | ... | ... | 6 | 2 | 226,874 |
| 5 | Surat ... | Rayatwári ... ... ... | 127,768 | 8,094 | 95,006 | 11,626 | ..... | 1 | 43,038 | 11,739 | ..... | 88 | 1,240 | 76 | 26 | 228 | 298,930 |
| | | Other Government ... ... | 2,383 | 22 | 952 | 34 | ..... | ..... | 275 | 71 | ..... | ..... | ..... | ..... | ..... | ..... | 3,737 |
| | | Alienated ... ... ... | 2,746 | 17 | 239 | 30 | ..... | ..... | 80 | 55 | ..... | ..... | ..... | ..... | ..... | ..... | 3,167 |
| | | Total ... | 132,897 | 8,133 | 96,197 | 11,690 | ... | 1 | 43,393 | 11,865 | ... | 88 | 1,240 | 76 | 26 | 228 | 305,834 |
| | *II.—Deccan* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 513,787 | 590,590 | 1,6840 | 319,066 | 5 | 1,936 | 2,805 | 10,146 | 277 | 4,379 | 1,462 | 667 | 73 | 28 | 1,461,561 |
| | | Other Government ... ... | 1,529 | 3,407 | 9,488 | 8,761 | ..... | 172 | 2,102 | 2,438 | 1 | 429 | 1,531 | 366 | ..... | ..... | 30,224 |
| | | Alienated ... ... ... | 18,248 | 10,980 | 546 | 5,292 | ..... | 204 | 2 | 267 | ..... | 150 | 41 | 22 | 32 | ..... | 35,784 |
| | | Total ... | 533,564 | 604,977 | 26,374 | 333,119 | 5 | 2,312 | 4,909 | 12,851 | 278 | 4,958 | 3,034 | 1,055 | 105 | 28 | 1,527,569 |
| 7 | Násik ... | Rayatwári ... ... ... | 167,781 | 586,283 | 46,120 | 345,709 | ..... | 3,940 | ..... | 143,929 | 1,483 | 42,175 | ..... | 2,215 | 75 | ..... | 1,339,710 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 7,844 | 26,319 | 2,202 | 32,564 | ..... | 281 | ..... | 8,179 | 119 | 2,613 | ..... | 100 | 7 | ..... | 80,228 |
| | | Total ... | 175,625 | 612,602 | 48,322 | 378,273 | ... | 4,221 | ... | 152,108 | 1,602 | 44,788 | ... | 2,315 | 82 | ... | 1,419,938 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 1,236,800 | 383,104 | 9,616 | 251,859 | 102 | 2,838 | 117 | 28,226 | 572 | 12,106 | 6 | 6,327 | 253 | 1,330 | 1,933,256 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 199,311 | 32,545 | 290 | 25,273 | 37 | 167 | 2 | 3 | 157 | 14 | 1 | 13 | 7 | 6 | 257,826 |
| | | Total ... | 1,436,111 | 415,649 | 9,906 | 277,132 | 139 | 3,009 | 119 | 28,229 | 729 | 12,120 | 7 | 6,340 | 260 | 1,336 | 2,191,082 |
| 9 | Poona ... | Rayatwári ... ... ... | 746,593 | 489,208 | 56,613 | 98,905 | 2,020 | 2,021 | 20 | 52,001 | 1,233 | 34,951 | 11 | 6,909 | 118 | 2,218 | 1,492,821 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 106,628 | 121,520 | 6,486 | 18,601 | 202 | 104 | ..... | 4,575 | 191 | 1,787 | ..... | 828 | 1 | 459 | 261,382 |
| | | Total ... | 853,221 | 610,728 | 63,099 | 117,506 | 2,222 | 2,125 | 20 | 56,576 | 1,424 | 36,738 | 11 | 7,737 | 119 | 2,677 | 1,754,203 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... ... | 1,330,314 | 164,865 | 20,064 | 49,753 | 973 | 12,335 | 1 | 19 | 919 | 1,569 | ..... | 148 | 27 | 7,240 | 1,588,227 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 98,506 | 16,970 | 928 | 3,410 | 212 | 944 | ..... | ..... | 81 | 100 | ..... | ..... | 1 | 708 | 121,860 |
| | | Total ... | 1,428,820 | 181,835 | 20,992 | 53,163 | 1,185 | 13,279 | 1 | 19 | 1,000 | 1,669 | ..... | 148 | 28 | 7,948 | 1,710,087 |
| 11 | Sátára ... | Rayatwári ... ... ... | 521,318 | 425,358 | 29,231 | 56,535 | 4,868 | 7,038 | 148 | 50,605 | 23,587 | 35,322 | 28 | ..... | 375 | 2,118 | 1,156,531 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 103,621 | 73,213 | 11,837 | 12,768 | 903 | 1,848 | ..... | 16,254 | 8,069 | 11,443 | ..... | ..... | 246 | 405 | 240,607 |
| | | Total ... | 624,939 | 498,571 | 41,068 | 69,303 | 5,771 | 8,886 | 148 | 66,859 | 31,656 | 46,765 | 28 | ..... | 621 | 2,523 | 1,397,138 |
| | *III.—Karnâtak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 601,343 | 85,759 | 101,642 | 106,577 | 227 | 5,516 | 193 | 47,815 | 68,058 | 25,122 | 88 | ..... | 2 | ..... | 1,042,342 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 157,381 | 30,383 | 8,366 | 18,022 | 52 | 1,332 | 68 | 7,021 | 12,010 | 4,135 | 85 | ..... | ..... | ..... | 238,855 |
| | | Total ... | 758,724 | 116,142 | 110,008 | 124,599 | 279 | 6,848 | 261 | 54,836 | 80,068 | 29,257 | 173 | ..... | 2 | ..... | 1,281,197 |
| 13 | Bijápur ... | Rayatwári ... ... ... | 1,253,564 | 242,888 | 9,764 | 188,648 | 2 | 535 | 33 | 121 | 20,950 | 6,870 | ..... | ..... | 9 | 5 | 1,723,389 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 144,283 | 24,148 | 638 | 17,251 | ..... | 138 | 14 | 10 | 4,463 | 752 | ..... | ..... | ..... | ..... | 191,697 |
| | | Total ... | 1,397,847 | 267,036 | 10,402 | 205,899 | 2 | 673 | 47 | 131 | 25,413 | 7,622 | ..... | ..... | 9 | 5 | 1,915,086 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 571,923 | 4,750 | 134,023 | 265,610 | 15 | 27 | 53 | 43,790 | 78,314 | 32,082 | 1 | ..... | 2 | ..... | 1,130,590 |
| | | Other Government ... ... | 152 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 84 | 4 | ..... | ..... | ..... | ..... | 241 |
| | | Alienated ... ... ... | 33,742 | 364 | 17,288 | 11,125 | ..... | 2 | ..... | 4,648 | 5,324 | 2,246 | ..... | ..... | ..... | ..... | 74,739 |
| | | Total ... | 605,817 | 5,115 | 151,311 | 276,735 | 15 | 29 | 53 | 48,438 | 83,722 | 34,332 | 1 | ..... | 2 | ..... | 1,205,570 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... ... ... | 73 | 13 | 322,821 | 144 | ..... | 69 | 14,030 | 70,364 | ..... | 31,682 | ..... | ..... | ..... | ..... | 439,196 |
| | | Other Government ... ... | ..... | ..... | 935 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 935 |
| | | Alienated ... ... ... | ..... | ..... | 7,711 | ..... | ..... | ..... | 21 | 353 | ..... | 160 | ..... | ..... | ..... | ..... | 8,245 |
| | | Total .. | 73 | 13 | 331,467 | 144 | ..... | 69 | 14,051 | 70,717 | ..... | 31,842 | ..... | ..... | ..... | ..... | 448,376 |
| 16 | Kolába ... | Rayatwári ... ... ... | ..... | ..... | 139,143 | ..... | ..... | ..... | 2,686 | 13,725 | ..... | 11,127 | ..... | ..... | ..... | ..... | 166,681 |
| | | Other Government ... ... | ..... | ..... | 59,866 | ..... | ..... | ..... | 24,010 | 47,293 | 8 | 39,021 | ..... | ..... | ..... | ..... | 170,198 |
| | | Alienated ... ... ... | ..... | ..... | 961 | ..... | ..... | ..... | ..... | 81 | ..... | 84 | ..... | ..... | ..... | ..... | 1,126 |
| | | Total ... | ..... | ..... | 199,970 | ..... | ..... | ..... | 26,696 | 61,099 | 8 | 50,232 | ..... | ..... | ..... | ..... | 338,005 |
| 17 | Ratnágiri ... | Rayatwári ... ... ... | ..... | ..... | 12,559 | ..... | ..... | ..... | 6,825 | 8,941 | ..... | 3,504 | ..... | ..... | ..... | ..... | 31,829 |
| | | Other Government ... ... | ..... | ..... | 123,486 | ..... | ..... | ..... | 91,520 | 105,903 | 1 | 66,168 | ..... | ..... | ..... | ..... | 387,078 |
| | | Alienated ... ... ... | ..... | ..... | 5,228 | ..... | ..... | ..... | 2,628 | 3,594 | ..... | 2,538 | ..... | ..... | ..... | ..... | 13,988 |
| | | Total ... | ..... | ..... | 141,273 | ..... | ..... | ..... | 100,973 | 118,438 | 1 | 72,210 | ..... | ..... | ..... | ..... | 432,895 |
| 18 | Kánara ... | Rayatwári ... ... ... | 782 | ..... | 183,694 | ..... | ..... | 15 | 2 | 7,058 | 202 | 381 | ..... | ..... | ..... | ..... | 192,134 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total .. | 782 | ..... | 183,694 | ..... | ..... | 15 | 2 | 7,058 | 202 | 381 | ..... | ..... | ..... | ..... | 192,134 |
| | Total A. ... | Rayatwári ... ... ... | 7,463,669 | 3,343,269 | 1,320,990 | 1,820,092 | 45,514 | 111,968 | 179,927 | 560,237 | 196,302 | 247,558 | 22,662 | 16,458 | 1,209 | 14,365 | 15,344,220 |
| | | Other Government ... ... | 163,254 | 156,152 | 217,570 | 109,390 | 7,412 | 16,863 | 165,917 | 169,757 | 820 | 108,927 | 20,969 | 609 | 71 | ..... | 1,137,711 |
| | | Alienated ... ... ... | 882,771 | 345,901 | 66,721 | 148,965 | 1,735 | 9,401 | 4,947 | 46,156 | 30,414 | 26,113 | 1,982 | 963 | 294 | 1,578 | 1,567,941 |
| | | Total ... | 8,509,694 | 3,845,322 | 1,605,281 | 2,078,447 | 54,661 | 138,232 | 350,791 | 776,150 | 227,536 | 382,598 | 45,613 | 18,030 | 1,574 | 15,943 | 18,049,872 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 75,879 | 25,393 | 176,581 | 28,554 | 7,401 | 1,222 | ..... | 1,246 | 32 | 117 | ..... | ..... | ..... | ..... | 316,425 |
| 20 | Hyderabad ... ... ... ... ... | | 107,685 | 241,882 | 170,963 | 31,667 | 2,608 | 257 | ..... | 27 | 13 | 237 | ..... | ..... | ..... | ..... | 555,339 |
| 21 | Shikárpur ... ... ... ... ... | | 272,564 | 12,549 | 191,472 | 138,811 | 1,571 | 7 | ..... | 109 | 471 | 24 | ..... | ..... | ..... | 65 | 617,643 |
| 22 | Upper Sind Frontier ... ... .. | | 82,322 | 5,963 | 7,979 | 14,458 | 263 | 6 | ..... | 10 | ..... | 541 | ..... | ..... | ..... | 88 | 111,630 |
| 23 | Thar and Párkar ... ... ... ... | | 3,138 | 222,634 | 86,922 | 20,993 | 574 | ..... | ..... | ..... | ..... | 68 | ..... | ..... | ..... | ..... | 334,329 |
| | | Total B. ... | 541,588 | 508,421 | 633,917 | 234,483 | 12,417 | 1,492 | ..... | 1,392 | 516 | 987 | ..... | ..... | ..... | 153 | 1,935,366 |
| | | Grand Total ... | 9,051,282 | 4,353,743 | 2,239,198 | 2,312,930 | 67,078 | 139,724 | 350,791 | 777,542 | 228,052 | 383,585 | 45,613 | 18,030 | 1,574 | 16,096 | 19,985,238 |

## III.—Crops, 1888-89—*continued.*

| No. | District. | | II.—Pulses. | | | | | | | | | | | | | | III.—Orchard and Garden Produce. | | | | | IV.—Drugs and Narcotics. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur (Pigeon Pea), Cajanus indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram), Phaseolus radiatus. | Math (Kidney Bean), Phaseolus aconitifolius | Val (large fruited Dolichos), Dolichos lablab. | Chavli (small-fruited Dolichos), Dolichos cetiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lákh lang), Lathyrus sativus. | Field Vetch (Guvár), Cyamopsis psoraliodes. | Others. | Total II. | A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | Tobacco (Tambákhu), Nicotiana tabacum. | Bháng, Gánja (Indian hemp), Cannabis sativa. | Opium (Afu), Papaver somniferum. | Coffee (Káfi, Bund), Coffea Arabica. | Tea (Chaha), Thea sinensis. | Cinchona officinalis. | Others. | Total IV |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 591 | 23,876 | 2,208 | 1,497 | 23,341 | 11 | 52 | 129 | ... | ... | ... | 3,374 | ... | 55,079 | 596 | 1,662 | 998 | 1,300 | 4,556 | 1,626 | ... | ... | ... | ... | ... | ... | 1,626 |
| | | Other Government. | 251 | 13,103 | 4,964 | 1,629 | 15,224 | 5 | 361 | 6,885 | ... | ... | ... | 2,735 | ... | 45,157 | 188 | 597 | 2,166 | 42 | 2,993 | 204 | ... | ... | ... | ... | ... | ... | 204 |
| | | Alienated ... | ... | 675 | 422 | 188 | 611 | ... | 10 | 650 | ... | ... | ... | 110 | ... | 2,666 | ... | 37 | ... | 26 | 63 | 4 | ... | ... | ... | ... | ... | ... | 4 |
| | | Total ... | 842 | 37,654 | 7,594 | 3,314 | 39,176 | 16 | 423 | 7,664 | ... | ... | ... | 6,219 | ... | 102,902 | 784 | 2,296 | 3,164 | 1,368 | 7,612 | 1,834 | ... | ... | ... | ... | ... | ... | 1,834 |
| 2 | Kaira ... ... | Rayatwári ... | 14,069 | 3,135 | 2,548 | 458 | 17,822 | 423 | 2,200 | ... | ... | ... | ... | 6,260 | ... | 46,915 | 538 | 772 | 7,250 | 162 | 8,722 | 4,461 | ... | ... | ... | ... | ... | ... | 4,461 |
| | | Other Government. | 7,514 | 206 | 503 | 105 | 4,913 | 142 | 170 | ... | ... | ... | ... | 2,739 | ... | 16,292 | 208 | 317 | 912 | 78 | 1,515 | 8,488 | ... | ... | ... | ... | ... | ... | 8,488 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 21,583 | 3,341 | 3,051 | 563 | 22,735 | 565 | 2,370 | ... | ... | ... | ... | 8,999 | ... | 63,207 | 746 | 1,089 | 8,162 | 240 | 10,237 | 12,949 | ... | ... | ... | ... | ... | ... | 12,949 |
| 3 | Panch Maháls ... | Rayatwári ... | 2,489 | 4,195 | 1,602 | 3,256 | 1,502 | 21 | 56 | 24 | 33 | ... | ... | 555 | ... | 13,733 | 113 | 207 | 380 | 16 | 716 | 103 | ... | ... | ... | ... | ... | ... | 103 |
| | | Other Government. | 1,090 | 452 | 1,100 | 1,258 | 936 | 7 | 125 | ... | 45 | ... | ... | 106 | ... | 5,119 | 70 | 19 | 53 | ... | 142 | 17 | ... | ... | ... | ... | ... | ... | 17 |
| | | Alienated ... | 650 | 217 | 346 | 116 | 742 | 3 | 91 | ... | 3 | ... | ... | 109 | ... | 2,277 | ... | ... | 35 | ... | 35 | 3 | ... | ... | ... | ... | ... | ... | 3 |
| | | Total ... | 4,229 | 4,864 | 3,048 | 4,630 | 3,180 | 31 | 272 | 24 | 81 | ... | ... | 770 | ... | 21,129 | 183 | 226 | 468 | 16 | 893 | 123 | ... | ... | ... | ... | ... | ... | 123 |
| 4 | Broach ... ... | Rayatwári ... | 13,139 | 244 | 273 | 8 | 914 | 747 | 149 | ... | 1,394 | ... | 28,165 | 222 | ... | 45,255 | 311 | 1,281 | 24,735 | 671 | 26,998 | 1,650 | 1 | ... | ... | ... | ... | ... | 1,651 |
| | | Other Government | 14 | ... | ... | ... | 3 | ... | ... | ... | ... | ... | 72 | ... | ... | 89 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 13,153 | 244 | 273 | 8 | 917 | 747 | 149 | ... | 1,394 | ... | 28,237 | 222 | ... | 45,344 | 311 | 1,281 | 24,735 | 671 | 26,998 | 1,650 | 1 | ... | ... | ... | ... | ... | 1,651 |
| 5 | Surat ... ... | Rayatwári ... | 22,385 | 1,989 | 2,451 | 1,889 | 570 | 10,012 | 585 | ... | 725 | 11 | 597 | 1,386 | ... | 42,600 | 404 | 1,861 | ... | 846 | 3,111 | 389 | 7 | ... | ... | ... | ... | ... | 396 |
| | | Other Government. | 180 | 7 | 47 | 4 | ... | 63 | 6 | ... | ... | ... | 7 | 14 | ... | 328 | ... | 11 | ... | 2 | 13 | 2 | ... | ... | ... | ... | ... | ... | 2 |
| | | Alienated ... | 22 | ... | 12 | 12 | 1 | 29 | 2 | ... | ... | ... | 5 | 2 | ... | 85 | ... | 22 | ... | 1 | 23 | 3 | ... | ... | ... | ... | ... | ... | 3 |
| | | Total ... | 22,587 | 1,996 | 2,510 | 1,905 | 571 | 10,104 | 593 | ... | 725 | 11 | 609 | 1,402 | ... | 43,013 | 404 | 1,894 | ... | 849 | 3,147 | 394 | 7 | ... | ... | ... | ... | ... | 401 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 50,263 | 44,003 | 3,958 | 19,682 | 2,862 | 205 | 618 | 50,482 | 1,885 | 775 | 108 | ... | ... | 174,841 | 2,241 | 3,725 | 457 | 3,576 | 9,999 | 2,166 | 35 | ... | ... | ... | ... | ... | 2,201 |
| | | Other Government. | 2,204 | 3,938 | ... | 487 | ... | ... | ... | 253 | 26 | 59 | ... | ... | ... | 6,967 | 9 | 9 | ... | 7 | 25 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| | | Alienated ... | 1,125 | 1,266 | 81 | 543 | 61 | 1 | 3 | 212 | 56 | 9 | ... | ... | ... | 3,357 | 543 | 312 | 1 | 301 | 1,157 | 155 | ... | ... | ... | ... | ... | ... | 155 |
| | | Total ... | 53,592 | 49,207 | 4,039 | 20,712 | 2,923 | 206 | 621 | 50,947 | 1,967 | 843 | 108 | ... | ... | 185,165 | 2,793 | 4,046 | 458 | 3,884 | 11,181 | 2,322 | 35 | ... | ... | ... | ... | ... | 2,357 |
| 7 | Násik ... ... | Rayatwári ... | 16,719 | 78,857 | 707 | 24,927 | 747 | 15 | 11 | 57,780 | 2,016 | 8,017 | 3,034 | ... | ... | 192,830 | 2,234 | 2,964 | 1,357 | 1,975 | 8,530 | 488 | 12 | ... | ... | ... | ... | ... | 500 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,028 | 6,372 | 6 | 763 | 3 | ... | ... | 1,858 | 240 | 865 | 336 | ... | ... | 11,471 | 712 | 499 | 71 | 131 | 1,413 | 45 | ... | ... | ... | ... | ... | ... | 45 |
| | | Total ... | 17,747 | 85,229 | 713 | 25,690 | 750 | 15 | 11 | 59,638 | 2,256 | 8,882 | 3,370 | ... | ... | 204,301 | 2,946 | 3,463 | 1,428 | 2,106 | 9,943 | 533 | 12 | ... | ... | ... | ... | ... | 545 |
| 8 | Ahmadnagar ... | Rayatwári ... | 17,824 | 120,037 | 4,609 | 4,070 | 8,549 | 1,362 | 62 | 24,764 | 1,319 | 364 | 9 | ... | ... | 182,969 | 2,729 | 1,444 | 2,253 | 1,396 | 7,796 | 2,038 | 245 | ... | ... | ... | ... | ... | 2,283 |
| | | Other Government. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 2,674 | 15,649 | 74 | ... | 1,326 | 28 | ... | 4,490 | 40 | ... | ... | ... | ... | 24,281 | 195 | 119 | 57 | 134 | 505 | 187 | 23 | ... | ... | ... | ... | ... | 210 |
| | | Total ... | 20,498 | 135,686 | 4,683 | 4,070 | 9,875 | 1,390 | 62 | 29,254 | 1,359 | 364 | 9 | ... | ... | 207,250 | 2,924 | 1,563 | 2,290 | 1,524 | 8,301 | 2,225 | 268 | ... | ... | ... | ... | ... | 2,493 |
| 9 | Poona ... ... | Rayatwári ... | 21,616 | 67,180 | 1,740 | 3,733 | 20,637 | 4,837 | 337 | 24,704 | 1,574 | 1,328 | ... | ... | ... | 147,086 | 10,597 | 1,344 | 2,806 | 3,020 | 17,767 | 535 | 7 | ... | ... | ... | ... | ... | 542 |
| | | Other Government. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 5,556 | 12,607 | 560 | 1,270 | 3,868 | 374 | 3 | 4,662 | 228 | 154 | ... | ... | ... | 29,282 | 2,387 | 403 | 299 | 633 | 3,722 | 12 | 9 | ... | ... | ... | ... | ... | 21 |
| | | Total ... | 27,172 | 79,787 | 2,300 | 5,003 | 23,905 | 5,211 | 340 | 29,366 | 1,802 | 1,482 | ... | ... | ... | 176,368 | 12,984 | 1,747 | 3,105 | 3,653 | 21,489 | 547 | 16 | ... | ... | ... | ... | ... | 563 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... | 56,333 | 61,071 | 2,696 | 391 | 20,370 | 69 | 13 | 5,261 | 2 | 38 | 359 | ... | ... | 146,603 | 3,059 | 1,429 | 354 | 1,626 | 6,468 | 890 | 23 | ... | ... | ... | ... | ... | 918 |
| | | Other Government ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 3,129 | 6,167 | 32 | 2 | 1,540 | 5 | ... | 457 | ... | ... | ... | ... | ... | 11,332 | 252 | 67 | 9 | 69 | 397 | 30 | ... | ... | ... | ... | ... | ... | 30 |
| | | Total ... | 59,462 | 67,238 | 2,728 | 393 | 21,910 | 74 | 13 | 5,718 | 2 | 38 | 359 | ... | ... | 157,935 | 3,311 | 1,496 | 363 | 1695 | 6,865 | 920 | 23 | ... | ... | ... | ... | ... | 943 |
| 11 | Sátára ... | Rayatwári ... | 44,089 | 79,541 | 12,918 | 26,018 | 46,334 | 3,728 | 137 | 38,283 | 939 | 400 | ... | ... | 15 | 253,302 | 4,732 | 793 | 568 | 1,323 | 7,416 | 6,489 | 167 | ... | 20 | ... | ... | ... | 6,676 |
| | | Other Government ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 10,234 | 17,042 | 2,465 | 6,892 | 7,232 | 863 | 166 | 7,354 | 403 | 134 | ... | ... | 14 | 52,799 | 1,143 | 280 | 88 | 332 | 1,843 | 776 | 3 | ... | ... | ... | ... | ... | 779 |
| | | Total ... | 55,223 | 96,583 | 15,383 | 32,910 | 53,566 | 4,591 | 303 | 45,637 | 1,342 | 534 | ... | ... | 29 | 306,101 | 5,875 | 1,073 | 656 | 1,655 | 9,259 | 7,265 | 170 | ... | 20 | ... | ... | ... | 7,455 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 43,098 | 46,647 | 5,609 | 4,541 | 3,122 | 5 968 | 169 | 41,760 | 4,999 | 5,328 | ... | ... | ... | 161,241 | 2,822 | 1,977 | 230 | 2,323 | 7,352 | 13,032 | ... | ... | 58 | ... | ... | ... | 13,090 |
| | | Other Government ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 11,279 | 12,018 | 2,758 | 514 | 1,231 | 700 | 39 | 9,040 | 264 | 427 | ... | ... | ... | 38,270 | 1,174 | 343 | 286 | 580 | 2,383 | 2,865 | ... | ... | 18 | ... | ... | ... | 2,883 |
| | | Total ... | 54,377 | 58,665 | 8,367 | 5,055 | 4,353 | 6,668 | 208 | 50,800 | 5,263 | 5,755 | ... | ... | ... | 199,511 | 3,996 | 2,320 | 516 | 2,903 | 9,735 | 15,897 | ... | ... | 76 | ... | ... | ... | 15,973 |
| 13 | Bijápur ... | Rayatwári ... | 79,788 | 52,595 | 33,155 | 6 | 6,464 | 4,144 | 3,845 | 28,919 | 26 | ... | ... | ... | ... | 208,942 | 1,149 | 1,209 | 73 | 2,461 | 4,892 | 1,467 | 1 | ... | ... | ... | ... | ... | 1,468 |
| | | Other Government ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 10,179 | 4,630 | 4,512 | 2 | 418 | 564 | 616 | 4,239 | 3 | ... | ... | ... | ... | 25,163 | 187 | 142 | 30 | 328 | 687 | 109 | ... | ... | ... | ... | ... | ... | 109 |
| | | Total ... | 89,967 | 57,225 | 37,667 | 8 | 6,882 | 4,708 | 4,461 | 33,158 | 29 | ... | ... | ... | ... | 234,105 | 1,336 | 1,351 | 103 | 2,789 | 5,579 | 1.576 | 1 | ... | ... | ... | ... | ... | 1,577 |
| 14 | Dhárwár ... | Rayatwári ... | 52,569 | 44,938 | 40,746 | 5,918 | 10,031 | 6,067 | 1,232 | 49,033 | 578 | 92 | ... | ... | ... | 211,204 | 1,800 | 3,134 | 9 | 4,021 | 8,964 | 724 | ... | ... | ... | ... | ... | ... | 724 |
| | | Other Government ... | 11 | ... | 7 | ... | 5 | ... | ... | 21 | ... | ... | ... | ... | ... | 44 | ... | 2 | ... | 2 | 4 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 3,005 | 1,724 | 2,282 | 266 | 455 | 444 | 47 | 3,235 | 77 | ... | ... | ... | ... | 11,535 | 90 | 374 | ... | 481 | 945 | 35 | ... | ... | ... | ... | ... | ... | 35 |
| | | Total ... | 55,585 | 46,662 | 43,035 | 6,184 | 10,491 | 6,511 | 1,279 | 52,289 | 655 | 92 | ... | ... | ... | 222,783 | 1,890 | 3,510 | 9 | 4,504 | 9,913 | 759 | ... | ... | ... | ... | ... | ... | 759 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 6,695 | 2,623 | 557 | 21,998 | ... | 3,710 | 3,973 | 851 | 17 | ... | 91 | ... | ... | 40,525 | 985 | 900 | 34 | 3,093 | 5,012 | 2 | ... | ... | ... | ... | ... | ... | 2 |
| | | Other Government ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | ... | 129 | 137 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 58 | ... | ... | 38 | ... | 4 | ... | ... | ... | ... | ... | ... | ... | 100 | 23 | 33 | 2 | 201 | 259 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 6,753 | 2,633 | 557 | 22,036 | ... | 3,714 | 3,973 | 851 | 17 | ... | 91 | ... | ... | 40,625 | 1,008 | 941 | 36 | 3,423 | 5,408 | 2 | ... | ... | ... | ... | ... | ... | 2 |
| 16 | Kolába ... | Rayatwári ... | 473 | 2,461 | 783 | 1,331 | ... | 3,951 | 42 | ... | ... | ... | ... | ... | ... | 9,041 | 61 | 322 | 1 | 1,817 | 2,201 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government ... | 2,087 | 1,108 | 1,523 | 8,127 | ... | 2,475 | 25 | ... | ... | ... | ... | ... | ... | 15,345 | 5 | 117 | ... | 3 | 125 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 18 | ... | ... | ... | 9 | ... | ... | ... | ... | ... | ... | ... | 27 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 2,560 | 3,587 | 2,306 | 9,458 | ... | 6,435 | 67 | ... | ... | ... | ... | ... | ... | 24,413 | 66 | 439 | 1 | 1,820 | 2,326 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri ... | Rayatwári ... | 25 | 5 | 33 | 635 | ... | 377 | 6 | 2,816 | ... | ... | ... | ... | ... | 3,897 | 6 | 12 | ... | 3,764 | 3,782 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government ... | 2,539 | 111 | 1,002 | 8,266 | ... | 8,367 | 154 | 7,483 | ... | ... | ... | ... | ... | 27,922 | 248 | 485 | ... | 5,453 | 6,181 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 38 | ... | 312 | 284 | ... | 119 | 5 | 956 | ... | ... | ... | ... | ... | 1,714 | ... | 16 | ... | 328 | 344 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 2,602 | 116 | 1,347 | 9,185 | ... | 8,863 | 165 | 11,255 | ... | ... | ... | ... | ... | 33,533 | 249 | 513 | ... | 9,545 | 10,307 | ... | ... | ... | ... | ... | ... | ... | ... |
| 18 | Kánara ... | Rayatwári ... | 105 | 287 | 1,192 | 1,521 | ... | 103 | 562 | 2,291 | 415 | 1 | ... | ... | 116 | 6,593 | 301 | 537 | 2,381 | 17,335 | 20,554 | ... | ... | ... | 41 | ... | ... | ... | 41 |
| | | Other Government ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 105 | 287 | 1,192 | 1,521 | ... | 103 | 562 | 2,291 | 415 | 1 | ... | ... | 116 | 6,593 | 301 | 537 | 2,381 | 17,335 | 20,554 | ... | ... | ... | 41 | ... | ... | ... | 41 |
| | Total A. ... | Rayatwári ... | 443,170 | 633,694 | 117,785 | 121,879 | 162,665 | 45,750 | 14,049 | 327,097 | 15,922 | 16,354 | 32,363 | 11,797 | 131 | 1,942,656 | 34,678 | 25,573 | 43,866 | 50,719 | 154,836 | 36,060 | 498 | ... | 119 | ... | ... | ... | 36,677 |
| | | Other Government ... | 15,890 | 18,925 | 9,146 | 19,876 | 21,081 | 11,059 | 841 | 14,642 | 71 | 59 | 79 | 5,594 | ... | 117,263 | 723 | 1,565 | 3,131 | 5,716 | 11,135 | 8,712 | ... | ... | ... | ... | ... | ... | 8,712 |
| | | Alienated ... | 48,977 | 78,385 | 13,862 | 10,890 | 17,488 | 3,143 | 982 | 37,153 | 1,314 | 1,589 | 341 | 221 | 14 | 214,359 | 6,706 | 2,647 | 878 | 3,545 | 13,776 | 4,224 | 35 | ... | 18 | ... | ... | ... | 4,277 |
| | | Total ... | 508,037 | 731,004 | 140,793 | 152,645 | 201,234 | 59,952 | 15,872 | 378,892 | 17,307 | 18,002 | 32,783 | 17,612 | 145 | 2,274,278 | 42,107 | 29,785 | 47,875 | 59,980 | 179,747 | 48,996 | 533 | ... | 137 | ... | ... | ... | 49,666 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | ... | 1,360 | 13,288 | 1,634 | 1,153 | ... | 39 | ... | ... | ... | 6,415 | ... | ... | 23,889 | 1,284 | 1,963 | 15,145 | 2,699 | 21,091 | 227 | 117 | ... | ... | ... | ... | ... | 344 |
| 20 | Hyderabad... | | ... | 3,135 | 2,142 | 19 | 23 | ... | 1,593 | ... | ... | ... | 10,087 | 134 | ... | 17,133 | 1,897 | 2,664 | 126 | 4,176 | 8,863 | 4,491 | 13 | ... | ... | ... | ... | ... | 4,504 |
| 21 | Shikárpur ... | | ... | 10,308 | 896 | 413 | ... | ... | 9 | ... | ... | ... | 51,933 | 5 | 38 | 63,602 | 1,902 | 6,238 | 1,083 | 3,976 | 13,199 | 3,300 | 171 | ... | ... | ... | ... | ... | 3,471 |
| 22 | Upper Sind Frontier ... | | ... | 3,195 | 517 | 22 | ... | ... | 252 | ... | ... | ... | 4,441 | ... | 95 | 8,522 | 85 | 1,409 | 14 | 60 | 1,568 | 51 | ... | ... | ... | ... | ... | ... | 51 |
| 23 | Thar and Párkar ... | | ... | ... | 2,694 | ... | ... | ... | 385 | ... | ... | ... | ... | 14 | ... | 3,043 | 27 | 616 | ... | 49 | 692 | 122 | ... | ... | ... | ... | ... | ... | 122 |
| | Total B. ... | | ... | 17,998 | 19,537 | 2,088 | 1,176 | ... | 2,228 | ... | ... | ... | 72,876 | 153 | 133 | 116,189 | 5,195 | 12,890 | 16,368 | 10,960 | 45,413 | 8,191 | 301 | ... | ... | ... | ... | ... | 8,492 |
| | Grand Total ... | | 508,037 | 749,002 | 160,330 | 154,733 | 202,410 | 59,952 | 18,100 | 378,892 | 17,307 | 18,002 | 105,659 | 17,765 | 278 | 2,390,467 | 47,302 | 42,675 | 64,243 | 70,940 | 225,160 | 57,187 | 834 | ... | 137 | ... | ... | ... | 58,158 |

## III.—Crops, 1888-89—*continued.*

| No. | District. | | V.—Condiments and Spices. | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cardamom (Veldode), Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (Ale), Zingiber officinale. | Black Pepper (Miri), Piper nigrum. | Betel leaves (Páne), Piper betel. | Betelnut (Supári), Areca catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badishep), Pimpinella anisum. | Dill-seed (Bálant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jire), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common mustard (Rái), Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us, Sherdi), Saccharum officinarum. | Others. | Total VII. |
| | 1 | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | ... | 1,182 | 265 | ... | ... | ... | ... | 40 | ... | 1 | 3 | ... | 307 | 5 | 31 | 1 | 1,835 | ... | ... | ... | 1,873 | ... | 1,873 |
| | | Other Government ... ... | ... | 266 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | ... | 15 | ... | 286 | ... | ... | ... | 709 | ... | 709 |
| | | Alienated ... ... ... | ... | 11 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11 | ... | ... | ... | 7 | ... | 7 |
| | | Total ... | ... | 1,459 | 265 | ... | ... | ... | ... | 40 | ... | 1 | 3 | ... | 312 | 5 | 46 | 1 | 2,132 | ... | ... | ... | 2,589 | ... | 2,589 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | ... | 921 | 104 | ... | ... | ... | 14 | 43 | 1 | ... | 1,273 | ... | 98 | 20 | 42 | 244 | 2,760 | ... | ... | ... | 827 | ... | 827 |
| | | Other Government ... ... | ... | 333 | 51 | ... | ... | ... | 1 | ... | ... | ... | 2,193 | 1 | 9 | 6 | 69 | 101 | 2,764 | ... | ... | ... | 818 | ... | 818 |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 1,254 | 155 | ... | ... | ... | 15 | 43 | 1 | ... | 3,466 | 1 | 107 | 26 | 111 | 345 | 5,524 | ... | ... | ... | 1645 | ... | 1,645 |
| 3 | Panch Mahals ... | Rayatwári ... ... ... | ... | 334 | 8 | ... | ... | ... | ... | ... | 6 | 1 | 37 | ... | 54 | ... | 20 | ... | 460 | ... | ... | ... | 306 | ... | 306 |
| | | Other Government ... ... | ... | 263 | ... | ... | ... | ... | ... | ... | ... | 4 | ... | ... | 38 | ... | 19 | ... | 324 | ... | ... | ... | 62 | ... | 62 |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | 34 | ... | 34 |
| | | Total ... | ... | 597 | 8 | ... | ... | ... | ... | ... | 6 | 5 | 37 | ... | 92 | ... | 39 | ... | 784 | ... | ... | ... | 402 | ... | 402 |
| 4 | Broach ... ... | Rayatwári ... ... ... | ... | 230 | 26 | ... | ... | ... | 25 | ... | 8 | 4 | ... | ... | 22 | ... | 51 | 3 | 369 | ... | ... | ... | 188 | ... | 188 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 230 | 26 | ... | ... | ... | 25 | ... | 8 | 4 | ... | ... | 22 | ... | 51 | 3 | 339 | ... | ... | ... | 188 | ... | 188 |
| 5 | Surat ... ... | Rayatwári ... ... ... | ... | 611 | 147 | ... | ... | ... | 80 | ... | ... | 7 | ... | 56 | 44 | 73 | 72 | 34 | 1,121 | ... | ... | ... | 6,841 | ... | 6,841 |
| | | Other Government ... ... | ... | 27 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 27 | ... | ... | ... | 113 | ... | 113 |
| | | Alienated ... ... ... | ... | 2 | 39 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 41 | ... | ... | ... | 10 | ... | 10 |
| | | Total ... | ... | 640 | 186 | ... | ... | ... | 80 | ... | ... | 7 | ... | 56 | 44 | 73 | 72 | 34 | 1,192 | ... | ... | ... | 6,964 | ... | 6,964 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | ... | 7,756 | 4 | ... | 377 | ... | 121 | 439 | 1,183 | 11,110 | ... | 2,842 | 136 | 127 | 169 | ... | 24,264 | ... | ... | ... | 2,830 | ... | 2,830 |
| | | Other Government ... ... | ... | 11 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 12 | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 123 | ... | ... | 3 | ... | 46 | 45 | ... | 74 | ... | 43 | ... | 63 | 46 | ... | 443 | ... | ... | ... | 81 | ... | 81 |
| | | Total ... | ... | 7,890 | 4 | ... | 380 | ... | 167 | 484 | 1,183 | 11,184 | ... | 2,885 | 136 | 191 | 215 | ... | 24,719 | ... | ... | ... | 2,911 | ... | 2,911 |
| 7 | Násik ... ... | Rayatwári ... ... ... | ... | 3,629 | 6 | ... | 145 | 1 | 48 | ... | ... | 52 | ... | 7 | 335 | 5 | 368 | ... | 4,596 | ... | ... | ... | 9,905 | ... | 9,905 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 388 | ... | ... | 34 | ... | ... | ... | ... | 3 | ... | ... | 8 | 12 | 46 | ... | 491 | ... | ... | ... | 1,010 | ... | 1,010 |
| | | Total ... | ... | 4,017 | 6 | ... | 179 | 1 | 48 | ... | ... | 55 | ... | 7 | 343 | 17 | 414 | ... | 5,087 | ... | ... | ... | 10,915 | ... | 10,915 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | ... | 5,559 | ... | ... | 384 | ... | 12 | ... | ... | 4 | ... | 1 | 12 | ... | 106 | ... | 6,078 | ... | ... | ... | 5,143 | ... | 5,143 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 642 | ... | ... | 28 | 1 | ... | ... | ... | ... | ... | ... | 3 | ... | 3 | ... | 677 | ... | ... | ... | 415 | ... | 415 |
| | | Total ... | ... | 6,201 | ... | ... | 412 | 1 | 12 | ... | ... | 4 | ... | 1 | 15 | ... | 109 | ... | 6,755 | ... | ... | ... | 5,558 | ... | 5,558 |
| 9 | Poona ... ... | Rayatwári ... ... ... | ... | 8,543 | 1 | ... | 377 | ... | 62 | ... | ... | 470 | ... | ... | 11 | 14 | 689 | ... | 10,167 | ... | ... | ... | 9,163 | ... | 9,163 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 1,627 | 1 | ... | 527 | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | 86 | ... | 2,243 | ... | ... | ... | 1,232 | ... | 1,232 |
| | | Total ... | ... | 10,170 | 2 | ... | 904 | ... | 63 | ... | ... | 470 | ... | ... | 12 | 14 | 775 | ... | 12 410 | ... | ... | ... | 10,395 | ... | 10,395 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | ... | ... | 7,794 | ... | ... | 302 | ... | 779 | ... | ... | 122 | ... | 37 | ... | ... | 83 | ... | 9,117 | ... | ... | ... | 4,221 | ... | 4,221 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | 678 | ... | ... | 3 | ... | ... | ... | ... | 53 | ... | ... | ... | ... | ... | ... | 734 | ... | ... | ... | 247 | ... | 247 |
| | | Total | ... | ... | 8,472 | ... | ... | 305 | ... | 779 | ... | ... | 175 | ... | 37 | ... | ... | 83 | ... | 9,851 | ... | ... | ... | 4,468 | ... | 4,468 |
| 11 | Sátára | Rayatwári | ... | ... | 11,533 | 36 | ... | 303 | 3 | 1,963 | 191 | 5 | 607 | ... | 72 | 89 | ... | 509 | ... | 15,311 | ... | ... | ... | 13,365 | ... | 13,365 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | 3,252 | 51 | ... | 62 | ... | 574 | 46 | ... | 170 | ... | 27 | ... | ... | 79 | ... | 4,261 | ... | ... | ... | 3,680 | ... | 3,680 |
| | | Total | ... | ... | 14,785 | 87 | ... | 365 | 3 | 2,537 | 237 | 5 | 777 | ... | 99 | 89 | ... | 588 | ... | 19,572 | ... | ... | ... | 17,045 | ... | 17,045 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | ... | ... | 14,048 | ... | ... | 87 | ... | 225 | 94 | ... | 1,020 | ... | ... | 129 | 125 | 991 | ... | 16,714 | ... | ... | ... | 9,550 | ... | 9,550 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | 3,208 | ... | ... | 107 | 5 | 68 | 71 | ... | 552 | ... | ... | 2 | ... | 234 | ... | 4,247 | ... | ... | ... | 2,944 | ... | 2,944 |
| | | Total | ... | ... | 17,251 | ... | ... | 194 | 5 | 293 | 165 | ... | 1,572 | ... | ... | 131 | 125 | 1,225 | ... | 20,961 | ... | ... | ... | 12,494 | ... | 12,494 |
| 13 | Bijápur | Rayatwári | ... | ... | 2,846 | ... | ... | 47 | 1 | 10 | 1 | ... | 14 | ... | ... | 6 | 2 | 154 | ... | 3,081 | ... | ... | ... | 1,232 | ... | 1,232 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | 327 | ... | ... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 29 | ... | 363 | ... | ... | ... | 127 | ... | 127 |
| | | Total | ... | ... | 3,173 | ... | ... | 54 | 1 | 10 | 1 | ... | 14 | ... | ... | 6 | 2 | 183 | ... | 3,444 | ... | ... | ... | 1,359 | ... | 1,359 |
| 14 | Dhárwár | Rayatwári | ... | ... | 47,434 | 6 | ... | 1,153 | 518 | 34 | 6 | ... | 473 | ... | 84 | 49 | 123 | 1,274 | ... | 51,154 | ... | ... | ... | 5,713 | ... | 5,713 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | 1,737 | ... | ... | 51 | 52 | 1 | ... | ... | 2 | ... | ... | ... | 11 | ... | ... | 1,854 | ... | ... | ... | 527 | ... | 527 |
| | | Total | ... | ... | 49,171 | 6 | ... | 1,204 | 570 | 35 | 6 | ... | 475 | ... | 84 | 49 | 134 | 1,274 | ... | 53,008 | ... | ... | ... | 6,240 | ... | 6,240 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | ... | ... | 417 | 168 | ... | 205 | 4 | 49 | ... | ... | 579 | ... | ... | ... | 2 | 4 | 2 | 1,430 | 2 | ... | 2 | 1,387 | ... | 1,387 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | ... | 417 | 168 | ... | 205 | 4 | 49 | ... | ... | 579 | ... | ... | ... | 2 | 4 | 2 | 1,430 | 2 | ... | 2 | 1,387 | ... | 1,387 |
| 16 | Kolába | Rayatwári | ... | ... | 35 | ... | ... | 26 | 458 | ... | ... | ... | 144 | ... | ... | ... | ... | ... | ... | 663 | ... | ... | ... | 52 | ... | 52 |
| | | Other Government | ... | ... | 6 | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 8 | ... | ... | ... | 21 | ... | 21 |
| | | Alienated | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | ... | 41 | ... | ... | 26 | 459 | ... | ... | ... | 145 | ... | ... | ... | ... | ... | ... | 671 | ... | ... | ... | 73 | ... | 73 |
| 17 | Ratnágiri | Rayatwári | ... | ... | 135 | ... | ... | ... | 415 | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 553 | 15 | ... | 15 | 42 | ... | 42 |
| | | Other Government | ... | ... | 2,240 | ... | ... | ... | 1,118 | 79 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3,437 | 10 | ... | 10 | 690 | ... | 690 |
| | | Alienated | ... | ... | 233 | ... | ... | ... | 19 | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 257 | ... | ... | ... | 18 | ... | 18 |
| | | Total | ... | ... | 2,608 | ... | ... | ... | 1,552 | 87 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4,247 | 25 | ... | 25 | 750 | ... | 750 |
| 18 | Kánara | Rayatwári | ... | 895 | 197 | 5 | 1,096 | 264 | 8,227 | 61 | ... | ... | 3 | ... | ... | ... | 1 | 4 | 258 | 11,011 | ... | ... | ... | 3,421 | ... | 3,421 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 895 | 197 | 5 | 1,096 | 264 | 8,227 | 61 | ... | ... | 3 | ... | ... | ... | 1 | 4 | 258 | 11,011 | ... | ... | ... | 3,421 | ... | 3,421 |
| | Total A. | Rayatwári | ... | 895 | 113,199 | 776 | 1,096 | 3,670 | 9,627 | 3,486 | 814 | 1,203 | 14,611 | 1,313 | 3,099 | 1,292 | 497 | 4,567 | 542 | 160,687 | 17 | ... | 17 | 76,059 | ... | 76,059 |
| | | Other Government | ... | ... | 3,146 | 51 | ... | ... | 1,119 | 80 | ... | ... | 5 | 2,193 | 1 | 52 | 7 | 103 | 101 | 6,858 | 10 | ... | 10 | 2,413 | ... | 2,413 |
| | | Alienated | ... | ... | 12,228 | 91 | ... | 822 | 77 | 695 | 162 | ... | 854 | ... | 70 | 14 | 86 | 523 | ... | 15,622 | ... | ... | ... | 10,332 | ... | 10,332 |
| | | Total | ... | 895 | 128,573 | 918 | 1,096 | 4,492 | 10,823 | 4,261 | 976 | 1,203 | 15,470 | 3,506 | 3,170 | 1,358 | 590 | 5,193 | 643 | 183,167 | 27 | ... | 27 | 88,804 | ... | 88,804 |
| | B.—SIND. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | ... | ... | 25 | ... | ... | ... | ... | 2 | 7 | ... | 15 | 88 | ... | ... | 5,841 | 26 | 79 | 6,083 | ... | 4 | 4 | 1,552 | ... | 1,552 |
| 20 | Hyderabad | | ... | ... | 140 | ... | ... | ... | ... | ... | 3 | ... | 12 | 2 | ... | ... | 222 | 21 | 9 | 409 | ... | 9 | 9 | 1,150 | ... | 1,150 |
| 21 | Shikárpur | | ... | ... | 223 | ... | ... | ... | ... | ... | 5 | ... | 699 | 22 | ... | ... | ... | 55 | ... | 1,004 | ... | 1 | 1 | 761 | ... | 761 |
| 22 | Upper Sind Frontier | | ... | ... | ..... | ... | ... | ... | ... | ... | 2 | ... | 129 | ... | ... | ... | ... | ... | ... | 131 | ... | ... | ... | 4 | ... | 4 |
| 23 | Thar and Párkar | | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | 38 | ... | ... | ... | 4 | ... | ... | 45 | ... | ... | ... | 10 | ... | 10 |
| | | Total B | ... | ... | 391 | ... | ... | ... | ... | 2 | 17 | ... | 893 | 112 | ... | ... | 6,067 | 102 | 88 | 7,672 | ... | 14 | 14 | 3,477 | ... | 3,477 |
| | | Grand Total | ... | 895 | 128,964 | 918 | 1,096 | 4,492 | 10,823 | 4,263 | 993 | 1,203 | 16,363 | 3,618 | 3,170 | 1,358 | 6,657 | 5,295 | 731 | 190,839 | 27 | 14 | 41 | 92,281 | ... | 92,281 |

## III.—Crops, 1888-89—*continued.*

| No. | District. | | VIII.—Oil Seeds. Sesame (Til), Sesamum Indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Eranḍya), Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shirsa), Brassica napus. | Niger-seed (Khurásani), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobare), Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli), Indigofera tinctoria. | Safflower (Kusumba), Carthamus persicus. | Morinda (A'l, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tag), Crotolaria juncea. | Hemp (Ambádi, Sheria), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | Acres. | Acres. | Acres. | Acres. |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad. | Rayatwári... | 16,477 | 1,048 | 3,964 | 43 | 2,973 | ... | ... | 2 | ... | 24,507 | 189 | 338 | ... | ... | 527 | 166,550 | 687 | 3 | ... | ... | ... | 167,240 | 321 | 730,752 | 65,642 | 665,110 |
| | | Other Govt. | 9,694 | 312 | 3,074 | ... | 3,082 | ... | ... | ... | ... | 16,162 | ... | 10 | ... | ... | 10 | 174,740 | 483 | 47 | ... | ... | ... | 175,270 | 26 | 611,925 | 8,080 | 603,845 |
| | | Alienated ... | 611 | ... | 50 | ... | ... | ... | ... | ... | ... | 661 | ... | 1 | ... | ... | 1 | 12,543 | 5 | ... | ... | ... | ... | 12,548 | ... | 37,155 | 259 | 36,896 |
| | | Total ... | 26,782 | 1,360 | 7,088 | 43 | 6,055 | ... | ... | 2 | ... | 41,330 | 189 | 349 | ... | ... | 538 | 353,833 | 1,175 | 50 | ... | ... | ... | 355,058 | 347 | 1,379,832 | 73,981 | 1,305,851 |
| 2 | Kairá ... | Rayatwári... | 5,450 | 368 | 3,334 | 1,492 | 15 | ... | ... | 4 | ... | 10,663 | 255 | 340 | ... | ... | 595 | 5,708 | 122 | 1,040 | ... | ... | ... | 6,870 | 34 | 553,567 | 24,544 | 529,023 |
| | | Other Govt. | 1,873 | ... | 610 | 67 | ... | ... | ... | ... | ... | 2,550 | 191 | 144 | ... | ... | 335 | 3,629 | 18 | 460 | ... | ... | ... | 4,107 | 12 | 161,091 | 6,605 | 154,486 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total ... | 7,323 | 368 | 3,944 | 1,559 | 15 | ... | ... | 4 | ... | 13,213 | 446 | 484 | ... | ... | 930 | 9,337 | 140 | 1,500 | ... | ... | ... | 10,977 | 46 | 714,658 | 31,149 | 683,509 |
| | Panch Maháls. | Rayatwári... | 10,282 | 1 | 392 | ... | 27 | 4,552 | ... | ... | ... | 15,254 | ... | 4 | ... | ... | 4 | 116 | 1,656 | 105 | ... | ... | ... | 1,877 | ... | 207,953 | 4,460 | 203,493 |
| | | Other Govt. | 1,267 | ... | 374 | ... | 8 | ... | ... | ... | ... | 1,649 | ... | ... | ... | ... | ... | 246 | 270 | 79 | ... | ... | ... | 595 | ... | 57,629 | 1,037 | 56,592 |
| | | Alienated ... | 483 | 116 | ... | ... | 1 | 427 | ... | ... | ... | 1,027 | ... | ... | ... | ... | ... | ..... | 60 | 28 | ... | ... | ... | 88 | ... | 20,707 | 34 | 20,673 |
| | | Total ... | 12,032 | 117 | 766 | ... | 36 | 4,979 | ... | ... | ... | 17,930 | ... | 4 | ... | ... | 4 | 362 | 1,986 | 212 | ... | ... | ... | 2,560 | ... | 286,289 | 5,531 | 280,758 |
| 4 | Broach ... | Rayatwári... | 11,544 | ... | 1,349 | ... | ... | ... | ... | ... | ... | 12,893 | 613 | 16 | ... | ... | 629 | 253,829 | 40 | 9 | ... | ... | ... | 253,878 | 58 | 568,534 | 281 | 568,253 |
| | | Other Govt. | 18 | ... | 1 | ... | ... | ... | ... | ... | ... | 19 | ... | ... | ... | ... | ... | 522 | ... | ... | ... | ... | ... | 522 | ... | 889 | ..... | 889 |
| | | Alienated .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total ... | 11,562 | ... | 1,350 | ... | ... | ... | ... | ... | ... | 12,912 | 613 | 16 | ... | ... | 629 | 254,351 | 40 | 9 | ... | ... | ... | 254,400 | 58 | 569,423 | 281 | 569,142 |
| 5 | Surat ... | Rayatwári... | 1,696 | ... | 16,805 | ... | ... | 88 | 74 | ... | ... | 18,663 | ... | 18 | 6 | ... | 24 | 88,759 | 1,566 | 77 | ... | ... | ... | 90,402 | 95 | 462,186 | 6,838 | 455,348 |
| | | Other Govt. | 2 | ... | 182 | ... | ... | ... | 8 | ... | ... | 192 | ... | ... | ... | ... | ... | 718 | 16 | ... | ... | ... | ... | 734 | ... | 5,146 | 63 | 5,083 |
| | | Alienated ... | 7 | ... | 49 | ... | ... | ... | 4 | ... | ... | 60 | ... | ... | ... | ... | ... | 320 | 4 | ... | ... | ... | ... | 324 | ... | 3,713 | 11 | 3,702 |
| | | Total ... | 1,705 | ... | 17,036 | ... | ... | 88 | 86 | ... | ... | 18,915 | ... | 18 | 6 | ... | 24 | 89,797 | 1,586 | 77 | ... | ... | ... | 91,460 | 95 | 471,045 | 6,912 | 464,133 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. | Rayatwári... | 67,800 | 69,473 | 3,881 | 2,294 | ... | 4,653 | 4,217 | ... | ... | 152,318 | 1,918 | 2 | 875 | ... | 2,795 | 896,077 | 983 | 2,836 | ... | ... | 2 | 899,898 | 45 | 2,730,752 | 7,885 | 2,722,867 |
| | | Other Govt. | 3,709 | 1,491 | 144 | 70 | ... | 620 | ... | ... | ... | 6,034 | ... | ... | ... | ... | ... | 3,898 | 180 | 3 | ... | ... | ... | 4,081 | 3 | 47,347 | ..... | 47,347 |
| | | Alienated ... | 1,677 | 1,058 | 52 | 3 | ... | 85 | 42 | ... | ... | 2,917 | ... | ... | ... | ... | ... | 22,888 | 122 | 85 | ... | ... | ... | 23,095 | ... | 66,989 | 367 | 66,622 |
| | | Total ... | 73,186 | 72,022 | 4,077 | 2,367 | ... | 5,358 | 4,259 | ... | ... | 161,269 | 1,918 | 2 | 875 | ... | 2,795 | 922,863 | 1,285 | 2,924 | ... | ... | 2 | 927,074 | 48 | 2,845,088 | 8,252 | 2,836,836 |
| 7 | Násik ... | Rayatwári... | 26,246 | 41,893 | 3,987 | 6,573 | ... | 100,562 | 13,162 | ... | ... | 192,423 | ... | ... | ... | ... | ... | 16,128 | 2,554 | 10 | ... | ... | ... | 18,692 | ... | 1,767,186 | 24,768 | 1,742,418 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 655 | 2,709 | 71 | 503 | ... | 4,469 | 996 | ... | ... | 9,403 | ... | ... | ... | ... | ... | 130 | 245 | ... | ... | ... | ... | 375 | ... | 104,436 | 1,332 | 103,104 |
| | | Total ... | 26,901 | 44,602 | 4,058 | 7,076 | ... | 105,031 | 14,158 | ... | ... | 201,826 | ... | ... | ... | ... | ... | 16,258 | 2,799 | 10 | ... | ... | ... | 19,067 | ... | 1,871,622 | 26,100 | 1,845,522 |
| 8 | Ahmadnagar. | Rayatwári... | 5,307 | 11,882 | 860 | 97,454 | ... | 25,386 | 3,167 | ... | ... | 144,056 | 212 | ... | ... | ... | 212 | 19,452 | 150 | 2,997 | ... | ... | ... | 22,599 | 31 | 2,304,423 | 28,847 | 2,275,576 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 804 | 1,953 | ... | 13,504 | ... | 149 | 180 | ... | ... | 16,590 | ... | ... | ... | ... | ... | 5,195 | 13 | 650 | ... | ... | ... | 5,858 | 4 | 306,366 | 1,483 | 304,883 |
| | | Total ... | 6,111 | 13,835 | 860 | 110,958 | ... | 25,535 | 3,347 | ... | ... | 160,646 | 212 | ... | ... | ... | 212 | 24,647 | 163 | 3,647 | ... | ... | ... | 28,457 | 35 | 2,610,789 | 30,330 | 2,580,459 |
| 9 | Poona ... | Rayatwári... | 14,740 | 820 | 154 | 81,613 | ... | 19,013 | 7,262 | ... | ... | 123,602 | ... | ... | ... | ... | ... | 856 | 436 | 3,124 | ... | ... | ... | 4,416 | 28 | 1,805,592 | 62,135 | 1,743,457 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 3,677 | 270 | 3 | 10,116 | ... | 3,045 | 1,775 | ... | ... | 18,886 | ... | ... | ... | ... | ... | ..... | 115 | 234 | ... | ... | ... | 349 | 1 | 317,118 | 10,439 | 306,679 |
| | | Total ... | 18,417 | 1,090 | 157 | 91,729 | ... | 22,058 | 9,037 | ... | ... | 142,488 | ... | ... | ... | ... | ... | 856 | 551 | 3,358 | ... | ... | ... | 4,765 | 29 | 2,122,710 | 72,574 | 2,050,136 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 5,799 | 21,650 | 7,687 | 135,262 | ... | 9,713 | 30,569 | ... | ... | 210,160 | 51 | ... | 273 | ... | 324 | 7,185 | 245 | 15,207 | ... | ... | ... | 22,567 | 35 | 1,988,655 | 25,574 | 1,963,081 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated | 777 | 1,337 | 798 | 9,392 | ... | 943 | 2,152 | ... | ... | 15,399 | ... | ... | ... | ... | ... | 449 | ... | 943 | ... | ... | ... | 1,392 | ... | 1,51,391 | 2,434 | 148,957 |
| | | Total | 6,576 | 22,367 | 8,485 | 144,654 | ... | 10,656 | 32,821 | ... | ... | 225,559 | 51 | ... | 273 | ... | 324 | 7,584 | 245 | 16,150 | ... | ... | ... | 23,979 | 35 | 2,140,046 | 28,008 | 2,112,038 |
| 11 | Sátára | Rayatwári | 302 | 7,160 | 719 | 22,641 | ... | 14,238 | 42,644 | ... | ... | 87,704 | ... | ... | ... | ... | ... | 6,342 | 4,417 | 5,855 | ... | ... | ... | 16,614 | 78 | 1,556,992 | 89,232 | 1,467,760 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated | 27 | 1,210 | 145 | 2,651 | ... | 3,631 | 13,702 | ... | ... | 21,366 | ... | ... | ... | ... | ... | 504 | 996 | 1,124 | ... | ... | ... | 2,624 | 2 | 327,961 | 23,802 | 304,159 |
| | | Total | 329 | 8,370 | 864 | 25,292 | ... | 17,869 | 56,346 | ... | ... | 109,070 | ... | ... | ... | ... | ... | 6,846 | 5,413 | 6,979 | ... | ... | ... | 19,238 | 75 | 1,884,953 | 113,034 | 1,771,919 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 7,175 | 1,864 | 8,951 | 32,935 | ... | 1,151 | 9,839 | ... | ... | 61,915 | ... | ... | ... | ... | ... | 123,736 | 3,030 | 2,822 | ... | ... | ... | 129,588 | 8 | 1441,800 | 28,106 | 1,413,694 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated | 1,192 | 101 | 2,393 | 9,365 | ... | 349 | 2,386 | ... | ... | 15,786 | ... | ... | ... | ... | ... | 22,953 | 1,091 | 519 | ... | ... | ... | 24,563 | 21 | 329,952 | 3,763 | 326,189 |
| | | Total | 8,367 | 1,965 | 11,344 | 42,300 | ... | 1,500 | 12,225 | ... | ... | 77,701 | ... | ... | ... | ... | ... | 146,689 | 4,121 | 3,341 | ... | ... | ... | 154,151 | 29 | 1,771,752 | 31,869 | 1,739,883 |
| 13 | Bijápur | Rayatwári | 22,363 | 28,531 | 7,893 | 66,892 | ... | 19,728 | 52 | ... | ... | 145,469 | ... | ... | ... | ... | ... | 301,666 | 99 | 11,358 | ... | ... | ... | 313,123 | 16 | 2,401,612 | 5,071 | 2,396,541 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated | 2,223 | 2,554 | 1,166 | 6,539 | ... | 1,463 | 7 | ... | ... | 13,952 | ... | ... | 1 | ... | 1 | 44,683 | 18 | 965 | ... | ... | ... | 45,666 | ... | 277,765 | 433 | 277,332 |
| | | Total | 24,586 | 31,085 | 9,059 | 73,431 | ... | 21,201 | 59 | ... | ... | 159,421 | ... | ... | 1 | ... | 1 | 346,349 | 117 | 12,323 | ... | ... | ... | 358,789 | 16 | 2,679,377 | 5,504 | 2,673,873 |
| 14 | Dhárwár | Rayatwári | 9,531 | 17,465 | 16,679 | 42,125 | ... | 2,919 | ... | ... | ... | 88,719 | ... | ... | ... | ... | ... | 469,580 | 429 | 4,905 | ... | ... | ... | 474,914 | 17 | 1,971,999 | 35,095 | 1,936,904 |
| | | Other Govt. | 1 | ... | 10 | ... | ... | 1 | ... | ... | ... | 12 | ... | ... | ... | ... | ... | 47 | ... | 3 | ... | ... | ... | 50 | ... | 351 | ..... | 351 |
| | | Alienated | 200 | 802 | 824 | 1,758 | ... | 360 | ... | ... | ... | 3,944 | ... | ... | ... | ... | ... | 15,616 | 10 | 306 | ... | ... | ... | 15,932 | 2 | 109,513 | 1,830 | 107,683 |
| | | Total | 9,732 | 18,267 | 17,513 | 43,883 | ... | 3,280 | ... | ... | ... | 92,675 | ... | ... | ... | ... | ... | 485,243 | 439 | 5,214 | ... | ... | ... | 490,896 | 19 | 2,081,863 | 36,925 | 2,044,938 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 5,558 | ... | 2,520 | 1 | 9 | 12,351 | ... | ... | 44 | 20,483 | ... | ... | ... | ... | ... | ..... | 3,186 | 2,213 | ... | ... | ... | 5,399 | 22 | 513,458 | 5,362 | 508,096 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 1,072 | 7 | 1,065 |
| | | Alienated | 4 | ... | ... | ... | ... | 97 | ... | ... | ... | 101 | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 8,705 | 61 | 8,644 |
| | | Total | 5,562 | ... | 2,520 | 1 | 9 | 12,448 | ... | ... | 44 | 20,584 | ... | ... | ... | ... | ... | ... | 3,186 | 2,213 | ... | ... | ... | 5,399 | 22 | 523,235 | 5,430 | 517,805 |
| 16 | Kolába | Rayatwári | 1,302 | ... | 14 | ... | ... | 80 | ... | ... | 126 | 1,472 | ... | ... | ... | ... | ... | ..... | 177 | 2 | ... | ... | ... | 179 | 1 | 180,290 | 5,091 | 175,199 |
| | | Other Govt. | 6,264 | ... | 5 | ... | ... | 45 | ... | ... | ... | 6,314 | ... | ... | ... | ... | ... | ..... | 110 | 5 | ... | ... | ... | 115 | ... | 192,126 | 4,108 | 188,018 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 1,158 | 9 | 1,144 |
| | | Total | 7,566 | ... | 19 | ... | ... | 75 | ... | ... | 126 | 7,786 | ... | ... | ... | ... | ... | ... | 287 | 7 | ... | ... | ... | 294 | 1 | 373,569 | 9,208 | 364,361 |
| 17 | Ratnágiri | Rayatwári | 1,626 | ... | ... | ... | ... | ... | ... | ... | ... | 1,626 | ... | ... | ... | ... | ... | ..... | 163 | 1 | ... | ... | ... | 164 | 131 | 42,039 | 4,709 | 37,330 |
| | | Other Govt. | 15,330 | ... | ... | ... | ... | ... | ... | ... | ... | 15,330 | ... | ... | ... | ... | ... | ..... | 4,435 | 10 | ... | ... | ... | 4,445 | ... | 445,093 | 26,832 | 418,261 |
| | | Alienated | 631 | ... | ... | ... | ... | ... | ... | ... | ... | 631 | ... | ... | ... | ... | ... | ..... | 486 | ... | ... | ... | ... | 486 | ... | 17,438 | 1,718 | 15,720 |
| | | Total | 17,587 | ... | ... | ... | ... | ... | ... | ... | ... | 17,587 | ... | ... | ... | ... | ... | ... | 5,084 | 11 | ... | ... | ... | 5,095 | 131 | 504,570 | 33,259 | 471,311 |
| 18 | Kánara | Rayatwári | 162 | 2 | 188 | ... | ... | 75 | ... | ... | 320 | 747 | ... | ... | ... | ... | ... | ..... | 60 | 42 | ... | ... | 2 | 104 | 24 | 234,629 | 11,427 | 223,202 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total | 162 | 2 | 188 | ... | ... | 75 | ... | ... | 320 | 747 | ... | ... | ... | ... | ... | ... | 60 | 42 | ... | ... | 2 | 104 | 24 | 234,629 | 11,427 | 223,202 |
| | Total A. | Rayatwári | 213,360 | 201,537 | 79,377 | 489,825 | 3,024 | 214,469 | 111,086 | 6 | 490 | 1,312,674 | 3,238 | 718 | 1,154 | ... | 5,110 | 2,355,934 | 20,000 | 52,606 | ... | ... | 4 | 2,428,544 | 939 | 21,462,419 | 435,067 | 21,027,352 |
| | | Other Govt. | 38,158 | 1,803 | 4,400 | 137 | 3,090 | 666 | 8 | ... | ... | 48,262 | 191 | 154 | ... | ... | 345 | 183,800 | 5,512 | 607 | ... | ... | ... | 189,919 | 41 | 1,522,669 | 46,732 | 1,475,937 |
| | | Alienated | 12,968 | 12,110 | 5,551 | 53,831 | 1 | 15,018 | 21,244 | ... | ... | 120,723 | ... | 1 | 1 | ... | 2 | 125,281 | 3,165 | 4,854 | ... | ... | ... | 133,300 | 30 | 2,080,362 | 47,975 | 2,032,387 |
| | | Total | 264,486 | 215,450 | 89,328 | 543,293 | 6,115 | 230,153 | 132,338 | 6 | 490 | 1,481,659 | 3,429 | 873 | 1,155 | ... | 5,457 | 2,665,015 | 28,677 | 58,067 | | ... | 4 | 2,751,763 | 1,010 | 25,065,450 | 529,774 | 24,535,676 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 10,261 | ... | 20 | ... | 3,733 | ... | ... | ... | 7,090 | 21,104 | 26 | 1 | ... | ... | 27 | 1,829 | 157 | ... | ... | ... | ... | 1,986 | 1 | 392,506 | 20,532 | 371,974 |
| 20 | Hyderabad | | 50,214 | ... | ... | ... | 4,525 | ... | ... | ... | 20,006 | 74,745 | 7,337 | ... | ... | 6 | 7,343 | 69,058 | 351 | ... | ... | ... | ... | 69,409 | 14,333 | 753,237 | 9,051 | 744,186 |
| 21 | Shikárpur | | 48,996 | ... | ... | ... | 23,786 | ... | ... | ... | 37,491 | 110,273 | 2,169 | ... | ... | 446 | 2,615 | 9,713 | 105 | 3 | ... | ... | ... | 9,821 | 80 | 822,470 | 118,376 | 704,094 |
| 22 | Upper Sind Frontier | | 59,364 | ... | ... | ... | 16,855 | ... | ... | ... | 1,904 | 78,123 | 136 | ... | ... | ... | 136 | 505 | 15 | ... | ... | ... | ... | 520 | 98 | 200,783 | 11,136 | 189,647 |
| 23 | Thar and Párkar | | 14,122 | ... | ... | ... | 366 | ... | ... | ... | 15,892 | 30,380 | 40 | ... | ... | ... | 40 | 12,235 | 31 | ... | ... | ... | ... | 12,266 | 2,355 | 383,282 | ... | 383,282 |
| | Total | | 182,957 | ... | 20 | ... | 49,265 | ... | ... | ... | 82,383 | 314,625 | 9,708 | 1 | ... | 452 | 10,161 | 93,340 | 659 | 3 | ... | ... | ... | 94,002 | 16,867 | 2,552,278 | 159,095 | 2,393,183 |
| | Grand Total | | 447,443 | 215,450 | 89,348 | 543,293 | 55,380 | 230,153 | 132,338 | 6 | 82,873 | 1,796,284 | 13,137 | 874 | 1,155 | 452 | 15,618 | 2,758,355 | 29,336 | 58,070 | ... | ... | 4 | 2,845,765 | 17,877 | 27,617,728 | 688,869 | 26,928,859 |

# IV.—Irrigation, 1888-89.

| No. | District. | | Net Area cropped. | Area irrigated from canals. | Area irrigated from other sources. | Total Area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct Area cropped with irrigation more than once. | Balance net irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | Acres. | | | Acres. | | | | | | | | Acres. | Acres. | Acres. |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 665,110 | 2,203 | 57,355 | 59,558 | 23,355 | 2,759 | 26,561 | 1,873 | 4,229 | 2,266 | 257 | 61,300 | 1,742 | 59,558 |
| | | Other Government ... ... | 603,845 | 121 | 23,022 | 23,143 | 16,362 | 241 | 3,994 | 709 | 798 | 79 | 1,078 | 23,261 | 118 | 23,143 |
| | | Alienated ... ... ... | 36,896 | ..... | 935 | 935 | 571 | 80 | 221 | 7 | 26 | 30 | ..... | 935 | ..... | 935 |
| | | Total ... | 1,305,851 | 2,324 | 81,312 | 83,636 | 40,288 | 3,080 | 30,776 | 2,589 | 5,053 | 2,375 | 1,335 | 85,496 | 1,860 | 83,636 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 529,023 | 1,209 | 33,985 | 35,194 | 9,868 | 5,215 | 10,073 | 827 | 4,304 | 4,807 | 1,339 | 36,433 | 1,239 | 35,194 |
| | | Other Government ... ... | 154,486 | ..... | 16,242 | 16,242 | 2,002 | 490 | 1,873 | 817 | 2,858 | 8,179 | 500 | 16,719 | 477 | 16,242 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 683,509 | 1,209 | 50,227 | 51,436 | 11,870 | 5,705 | 11,946 | 1,644 | 7,162 | 12,986 | 1,839 | 53,152 | 1,716 | 51,436 |
| 3 | Panch Maháls. | Rayatwári ... ... ... | 203,493 | 9 | 1,391 | 1,400 | 197 | 52 | 321 | 305 | 271 | 249 | 9 | 1,404 | 4 | 1,400 |
| | | Other Government ... ... | 56,592 | 10 | 773 | 783 | 225 | ..... | 188 | 81 | 266 | 28 | ..... | 783 | ..... | 783 |
| | | Alienated ... ... ... | 20,673 | ..... | 36 | 36 | ..... | ..... | 2 | 34 | ..... | ..... | ..... | 36 | ..... | 36 |
| | | Total ... | 280,758 | 19 | 2,200 | 2,219 | 422 | 52 | 506 | 420 | 537 | 277 | 9 | 2,223 | 4 | 2,219 |
| 4 | Broach ... | Rayatwári ... ... ... | 568,253 | ..... | 989 | 989 | 112 | ..... | 11 | 102 | 535 | 232 | 12 | 1,004 | 15 | 989 |
| | | Other Government .. ... | 889 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 569,142 | ... | 989 | 989 | 112 | ... | 11 | 102 | 535 | 232 | 12 | 1,004 | 15 | 989 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 455,343 | ..... | 9,949 | 9,949 | 20 | 1,151 | 49 | 6,841 | 1,424 | 583 | ..... | 10,068 | 119 | 9,949 |
| | | Other Government ... ... | 5,083 | ..... | 130 | 130 | ..... | ..... | ..... | 113 | 4 | 13 | ..... | 130 | ..... | 130 |
| | | Alienated ... ... ... | 3,702 | ..... | 53 | 53 | ..... | ..... | ..... | 10 | ..... | 43 | ..... | 53 | ..... | 53 |
| | | Total ... | 464,133 | ... | 10,132 | 10,132 | 20 | 1,151 | 49 | 6,964 | 1,428 | 639 | ... | 10,251 | 119 | 10,132 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 2,722,867 | 15,451 | 27,275 | 42,726 | 14,624 | 2,388 | 5,203 | 2,830 | 9,717 | 9,058 | 457 | 44,277 | 1,551 | 42,726 |
| | | Other Government ... ... | 47,347 | 9 | 67 | 76 | 55 | ..... | ..... | ..... | 18 | 3 | ..... | 76 | ..... | 76 |
| | | Alienated ... ... ... | 66,622 | 534 | 1,475 | 2,009 | 311 | 32 | 230 | 81 | 1,426 | 105 | 1 | 2,186 | 177 | 2,009 |
| | | Total ... | 2,836,836 | 15,994 | 28,817 | 44,811 | 14,990 | 2,420 | 5,433 | 2,911 | 11,161 | 9,166 | 458 | 46,539 | 1,728 | 44,811 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 1,742,418 | 28,300 | 45,089 | 73,389 | 26,883 | 4,416 | 14,949 | 9,358 | 10,927 | 13,241 | 1,982 | 81,756 | 8,367 | 73,389 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 103,104 | 2,059 | 3,981 | 6,040 | 1,679 | 319 | 1,189 | 954 | 1,180 | 1,084 | 61 | 6,466 | 426 | 6,040 |
| | | Total ... | 1,845,522 | 30,359 | 49,070 | 79,429 | 28,562 | 4,735 | 16,138 | 10,312 | 12,107 | 14,325 | 2,043 | 88,222 | 8,793 | 79,429 |
| 8 | Ahmadnagar . | Rayatwári ... ... ... | 2,275,576 | 7,901 | 74,095 | 81,996 | 27,096 | 593 | 32,851 | 3,854 | 16,884 | 8,875 | 2,727 | 92,880 | 10,884 | 81,996 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. ... ... | 304,883 | 834 | 9,907 | 10,741 | 4,018 | 129 | 4,714 | 415 | 1,775 | 692 | 55 | 11,798 | 1,057 | 10,741 |
| | | Total ... | 2,580,459 | 8,735 | 84,002 | 92,737 | 31,114 | 722 | 37,565 | 4,269 | 18,659 | 9,567 | 2,782 | 104,678 | 11,941 | 92,737 |
| 9 | Poona... ... | Rayatwári ... ... ... | 1,743,457 | 27,291 | 54,342 | 81,633 | 21,362 | 1,242 | 32,786 | 9,032 | 30,859 | 4,792 | 2,136 | 102,209 | 20,576 | 81,633 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 306,679 | 1,961 | 10,635 | 12,596 | 3,194 | 56 | 3,667 | 1,223 | 4,316 | 763 | 732 | 13,951 | 1,355 | 12,596 |
| | | Total ... | 2,050,136 | 29,252 | 64,977 | 94,229 | 24,556 | 1,298 | 36,453 | 10,255 | 35,175 | 5,555 | 2,868 | 116,160 | 21,931 | 94,229 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. .. | 1,963,081 | 9,042 | 70,241 | 79,283 | 29,564 | 4,578 | 38,913 | 4,221 | 6,860 | 17,570 | 354 | 102,060 | 22,777 | 79,283 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 148,957 | 121 | 4,721 | 4,842 | 2,158 | 239 | 3,025 | 247 | 331 | 976 | 9 | 6,985 | 2,143 | 4,842 |
| | | Total ... | 2,112,038 | 9,163 | 74,962 | 84,125 | 31,722 | 4,817 | 41,938 | 4,468 | 7,191 | 18,546 | 363 | 109,045 | 24,920 | 84,125 |
| 11 | Sátára ... | Rayatwári .. .. .. | 1,467,760 | 6,385 | 74,423 | 80,808 | 19,518 | 4,251 | 20,101 | 13,283 | 12,602 | 24,943 | 461 | 95,159 | 14,351 | 80,808 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 304,159 | 729 | 20,656 | 21,385 | 5,053 | 1,668 | 2,932 | 3,628 | 3,959 | 6,412 | 89 | 23,741 | 2,356 | 21,385 |
| | | Total ... | 1,771,919 | 7,114 | 95,079 | 102,193 | 24,571 | 5,919 | 23,033 | 16,911 | 16,561 | 31,355 | 550 | 118,900 | 16,707 | 102,193 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. .. | 1,413,694 | 2,048 | 31,995 | 34,043 | 1,889 | 7,627 | 4,996 | 9,422 | 10,576 | 1,040 | 136 | 35,686 | 1,643 | 34,043 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 326,189 | 1,126 | 8,620 | 9,746 | 908 | 287 | 1,969 | 2,832 | 3,208 | 1,041 | 246 | 10,491 | 745 | 9,746 |
| | | Total ... | 1,739,883 | 3,174 | 40,615 | 43,789 | 2,797 | 7,914 | 6,965 | 12,254 | 13,784 | 2,081 | 382 | 46,177 | 2,388 | 43,789 |
| 13 | Bijápur ... | Rayatwári .. .. .. | 2,396,541 | 416 | 8,917 | 9,333 | 1,681 | 1,087 | 877 | 1,232 | 3,397 | 1,780 | 73 | 10,127 | 794 | 9,333 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 277,332 | 3 | 1,280 | 1,283 | 213 | 72 | 202 | 127 | 523 | 248 | 30 | 1,415 | 132 | 1,283 |
| | | Total ... | 2,673,873 | 419 | 10,197 | 10,616 | 1,894 | 1,159 | 1,079 | 1,359 | 3,920 | 2,028 | 103 | 11,542 | 926 | 10,616 |
| 14 | Dhárwár ... | Rayatwári .. .. .. | 1,936,904 | 7,437 | 79,842 | 87,279 | 24 | 76,357 | 213 | 5,283 | 5,286 | 995 | 9 | 88,367 | 888 | 87,279 |
| | | Other Government .. .. | 351 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 107,683 | 715 | 8,252 | 8,967 | .... | 8,164 | 26 | 441 | 353 | 20 | .... | 9,004 | 37 | 8,967 |
| | | Total ... | 2,044,938 | 8,152 | 88,094 | 96,246 | 24 | 84,521 | 239 | 5,724 | 5,639 | 1,015 | 9 | 97,171 | 925 | 96,246 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána... ... | Rayatwári .. .. .. | 508,096 | .... | 5,290 | 5,290 | .... | .... | .... | 1,351 | 3,725 | 185 | 32 | 5,293 | 3 | 5,290 |
| | | Other Government .. .. | 1,065 | .... | 8 | 8 | .... | .... | .... | .... | 8 | .... | .... | 8 | .... | 8 |
| | | Alienated .. .. .. | 8,644 | .... | 57 | 57 | .... | .... | .... | .... | 57 | .... | .... | 57 | .... | 57 |
| | | Total ... | 517,805 | ... | 5,355 | 5,355 | ... | ... | ..... | 1,351 | 3,790 | 185 | 32 | 5,358 | 3 | 5,355 |
| 16 | Kolába ... | Rayatwári .. .. .. | 175,199 | .... | 2,287 | 2,287 | .... | .... | .... | 80 | 1,939 | 275 | .... | 2,294 | 7 | 2,287 |
| | | Other Government .. .. | 188,018 | .... | 28 | 28 | .... | .... | .... | 10 | 18 | .... | .... | 28 | .... | 28 |
| | | Alienated .. .. .. | 1,144 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 364,361 | ... | 2,315 | 2,315 | ... | ... | ..... | 90 | 1,957 | 275 | ... | 2,322 | 7 | 2,315 |
| 17 | Ratnágiri ... | Rayatwári .. .. .. | 37,330 | 351 | 526 | 877 | .... | 411 | 146 | 62 | 258 | .... | .... | 877 | .... | 877 |
| | | Other Government .. .. | 418,261 | 2,631 | 3,624 | 6,255 | .... | 3,211 | 435 | 455 | 2,142 | 12 | .... | 6,255 | .... | 6,255 |
| | | Alienated .. .. .. | 15,720 | 11 | 197 | 208 | .... | 152 | 3 | 14 | 39 | .... | .... | 208 | .... | 208 |
| | | Total ... | 471,311 | 2,993 | 4,347 | 7,340 | ... | 3,774 | 584 | 531 | 2,439 | 12 | ... | 7,340 | ... | 7,340 |
| 18 | Kánara ... | Rayatwári .. .. .. | 223,202 | .... | 27,510 | 27,510 | .... | 14,342 | 574 | 2,774 | 7,456 | 2,875 | .... | 28,021 | 511 | 27,510 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 223,202 | ... | 27,510 | 27,510 | ... | 14,342 | 574 | 2,774 | 7,456 | 2,875 | ... | 28,021 | 511 | 27,510 |
| | Total A. ... | Rayatwári .. .. .. | 21,027,352 | 108,043 | 605,501 | 713,544 | 176,193 | 126,469 | 188,624 | 72,730 | 131,249 | 93,766 | 9,984 | 799,015 | 85,471 | 713,544 |
| | | Other Government .. .. | 1,475,987 | 2,771 | 43,894 | 46,665 | 18,644 | 3,942 | 6,485 | 2,185 | 6,112 | 8,314 | 1,578 | 47,260 | 595 | 46,665 |
| | | Alienated .. .. .. | 2,032,387 | 8,093 | 70,805 | 78,898 | 18,105 | 11,198 | 18,180 | 10,013 | 17,193 | 11,414 | 1,223 | 87,326 | 8,428 | 78,898 |
| | | Total ... | 24,535,676 | 118,907 | 720,200 | 839,107 | 212,942 | 141,609 | 213,289 | 84,928 | 154,554 | 113,494 | 12,785 | 933,601 | 94,494 | 839,107 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 371,974 | 258,727 | 113,247 | 371,974 | 28,554 | 176,582 | 135,178 | 1,552 | 5,946 | 29,549 | 15,145 | 392,506 | 20,532 | 371,974 |
| 20 | Hyderabad ... ... ... ... | | 744,186 | 695,679 | 34,874 | 730,553 | 29,324 | 170,963 | 363,123 | 1,150 | 8,393 | 166,503 | 126 | 739,582 | 9,029 | 730,553 |
| 21 | Shikárpur ... ... ... ... | | 704,094 | 583,355 | 120,739 | 704,094 | 138,811 | 191,472 | 350,962 | 761 | 13,125 | 126,256 | 1,083 | 822,470 | 118,376 | 704,094 |
| 22 | Upper Sind Frontier .... ... ... | | 189,647 | 183,558 | 6,089 | 189,647 | 14,458 | 7,979 | 97,715 | 4 | 1,554 | 79,059 | 14 | 200,783 | 11,136 | 189,647 |
| 23 | Thar and Párkar ... ... ... | | 383,282 | Not available. | | | | | | | | | | | | |
| | | Total B. ... | 2,393,183 | 1,721,319 | 274,949 | 1,996,268 | 211,147 | 546,996 | 946,978 | 3,467 | 29,018 | 401,367 | 16,368 | 2,155,341 | 159,073 | 1,996,268 |
| | | Grand Total ... | 26,928,859 | 1,840,226 | 995,149 | 2,835,375 | 424,089 | 688,605 | 1,160,267 | 88,395 | 183,572 | 514,861 | 29,153 | 3,088,942 | 253,567 | 2,835,375 |

# V.—Agricultural Stock, 1888-89.

| No. | District. | | Cattle and other Quadrupeds. | | | | | | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Plough Cattle. | | Bulls for breeding purposes only. | | Oxen and He-Buffaloes for other purposes. | | Milch Cattle. | | Young Stock. | | Total Cattle (columns 2 to 11.) | Horses and Ponies. | Sheep. | Goats. | Small. | Large, *i.e.* over two Bullocks. | For riding. | For carrying loads. |
| | | | Oxen. | He-Buffaloes. | Bulls. | Bull Buffaloes. | Oxen. | He-Buffaloes. | Cows. | She-Buffaloes. | Calves. | Buffalo Calves. | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. | 79,977 | 95 | 394 | 288 | 3,480 | 598 | 47,629 | 58 339 | 26,794 | 26,819 | 244,413 | 3,057 | 24,827 | 17,892 | 38,079 | 68 | 845 | 12,740 |
| | | Other Government . | 54,593 | 136 | 285 | 287 | 659 | 206 | 34,647 | 27,798 | 15 810 | 10,782 | 145,203 | 3,075 | 21,705 | 17,387 | 25,662 | 308 | 197 | 8,321 |
| | | Alienated .. .. | 5,771 | 1 | 20 | 18 | 31 | 27 | 3,070 | 3,076 | 1,023 | 945 | 13,982 | 250 | 1,647 | 2,202 | 2,563 | 68 | 54 | 1,015 |
| | | Total ... | 140,341 | 232 | 699 | 593 | 4,170 | 831 | 85,346 | 89,213 | 43,627 | 38,546 | 403,598 | 6,382 | 48,179 | 37,981 | 66,304 | 444 | 1,096 | 22,076 |
| 2 | Kaira ... ... | Rayatwári .. .. | 92,796 | 26 | 245 | 297 | 554 | 106 | 38,577 | 72,225 | 31,235 | 46,631 | 282,692 | 1,853 | 4,701 | 27,615 | 46,638 | 6 | 686 | 18,952 |
| | | Other Government . | 23,051 | 2 | 37 | 126 | 159 | 8 | 2,509 | 31,673 | 3,345 | 21,190 | 85,190 | 272 | 1,139 | 6,076 | 13,331 | ... | 532 | 7,852 |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | ..... | .... | .... | .... | .... | ... | .. | .. |
| | | Total ... | 115,847 | 28 | 282 | 423 | 713 | 114 | 41,086 | 106,898 | 34,580 | 67,821 | 367,792 | 2,125 | 5,840 | 33,691 | 59,969 | 6 | 1,218 | 26,804 |
| 3 | Panch Mahals... | Rayatwári .. .. | 51,291 | 13 | 265 | 205 | 1,528 | 54 | 41,068 | 13,973 | 35,111 | 8,200 | 151,708 | 1,606 | 14,485 | 2,877 | 26,404 | ... | 145 | 5,194 |
| | | Other Government . | 20,809 | 15 | 58 | 43 | 389 | 76 | 17,394 | 5,720 | 13,499 | 3,126 | 61,429 | 668 | 5,736 | 3,041 | 10,275 | .... | 62 | 2,307 |
| | | Alienated .. .. | 11,766 | 3 | 70 | 49 | 355 | 19 | 10,523 | 2,658 | 8,950 | 1,535 | 35,928 | 254 | 4,344 | 402 | 5,855 | .... | 68 | 1,294 |
| | | Total ... | 83,866 | 31 | 393 | 297 | 2,272 | 149 | 68,985 | 22,351 | 57,860 | 12,861 | 249,065 | 2,528 | 24,565 | 6,320 | 42,534 | ..... | 275 | 8,795 |
| 4 | Broach ... ... | Rayatwári .. .. | 54,582 | 7 | 67 | 105 | 761 | 26 | 10,698 | 28,205 | 13,949 | 18,060 | 126,460 | 2,296 | 19,018 | 13,739 | 26,514 | .... | 3,207 | 15,559 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Total ... | 54,582 | 7 | 67 | 105 | 761 | 26 | 10,698 | 28,205 | 13,949 | 18,060 | 126,460 | 2,296 | 19,018 | 13,739 | 26,514 | ..... | 3,207 | 15,559 |
| 5 | Surat ... ... | Rayatwári .. .. | 98,116 | 4,025 | 398 | 214 | 5,804 | 230 | 60,547 | 41,348 | 69,974 | 30,285 | 310,941 | 969 | 60,575 | 35,137 | 48,376 | 943 | 7,783 | 27,623 |
| | | Other Government . | 1,334 | 70 | 6 | 5 | 57 | 1 | 1,110 | 696 | 1,237 | 525 | 5,041 | 1 | 585 | 571 | 495 | 16 | 79 | 432 |
| | | Alienated .. .. | 675 | 12 | .. | 2 | .... | .. | 359 | 270 | 409 | 179 | 1,906 | 2 | 153 | 40 | 309 | 2 | 51 | 195 |
| | | Total ... | 100,125 | 4,107 | 404 | 221 | 5,861 | 231 | 62,016 | 42,314 | 71,620 | 30,989 | 317,888 | 972 | 61,313 | 35,748 | 49,180 | 961 | 7,913 | 28,250 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. | 312,133 | 1,868 | 3,609 | 680 | 18,314 | 2,386 | 175,717 | 95,398 | 129,828 | 53,756 | 793,684 | 19,443 | 36,396 | 116,254 | 90,114 | 18,349 | 31,462 | 59,184 |
| | | Other Government . | 17,475 | 90 | 66 | 18 | 706 | 34 | 14,783 | 2,558 | 10,544 | 1,277 | 47,551 | 334 | 117 | 2,172 | 8,348 | 51 | 256 | 2,532 |
| | | Alienated .. .. | 8,953 | 49 | 54 | 12 | 647 | 60 | 5,098 | 2,525 | 3,445 | 1,307 | 22,060 | 484 | 1,570 | 3,373 | 1,920 | 920 | 718 | 1,318 |
| | | Total ... | 338,561 | 2,002 | 3,729 | 710 | 19,667 | 2,480 | 195,508 | 100,481 | 143,817 | 56,340 | 863,295 | 20,261 | 38,083 | 121,799 | 100,382 | 19,320 | 32,436 | 63,034 |
| 7 | Násik ... .. | Rayatwári .. .. | 187,313 | 22,852 | 3,135 | 282 | 11,125 | 712 | 139,325 | 24,742 | 87,242 | 13,700 | 491,028 | 12,542 | 90,902 | 86,617 | 43,614 | 23,750 | 10,631 | 19,007 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | ... | .... | .... | .... | .. | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 13,071 | 1,401 | 151 | 24 | 612 | 42 | 7,322 | 1,600 | 4,448 | 768 | 29,439 | 743 | 6,906 | 4,931 | 2,686 | 1,923 | 707 | 1,352 |
| | | Total ... | 200,384 | 24,253 | 3,286 | 306 | 11,737 | 754 | 147,247 | 26,342 | 91,690 | 14,468 | 520,467 | 13,285 | 97,808 | 91,548 | 46,300 | 25,673 | 11,338 | 20,359 |
| 8 | Ahmadnagar ... | Rayatwári .. .. | 244,038 | 6,150 | 690 | 174 | 7,728 | 1,345 | 170,339 | 29,917 | 116,088 | 16,515 | 592,979 | 20,416 | 237,122 | 136,127 | 23,542 | 37,651 | 10,839 | 16,412 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 28,510 | 148 | 78 | 20 | 1,083 | 151 | 18,608 | 2,841 | 13,322 | 1,643 | 66,404 | 2,615 | 32,416 | 15,637 | 3,486 | 4,181 | 1,041 | 1,709 |
| | | Total .. | 272,548 | 6,298 | 768 | 194 | 8,811 | 1,496 | 188,947 | 32,758 | 129,405 | 18,158 | 659,383 | 23,031 | 269,538 | 151,764 | 27,028 | 41,832 | 11,880 | 18,121 |
| 9 | Poona ... ... | Rayatwári .. .. | 212,276 | 7,874 | 869 | 250 | 7,636 | 987 | 131 358 | 37,471 | 76,744 | 25,415 | 500,880 | 11,812 | 225,818 | 72,977 | 24,038 | 24,589 | 2,344 | 18,318 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .. | .... | .... | .. | .. |
| | | Alienated .. .. | 42,768 | 504 | 117 | 18 | 1,011 | 85 | 22,041 | 6,224 | 11,303 | 2,952 | 87,023 | 1,952 | 24,545 | 11,455 | 2,674 | 4,846 | 303 | 4,265 |
| | | Total ... | 255,044 | 8,378 | 986 | 268 | 8,647 | 1,072 | 153,399 | 43,695 | 88,047 | 28,367 | 587,903 | 13,764 | 250,363 | 84,432 | 26,712 | 29,435 | 2,647 | 22,583 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 173,289 | 10,728 | 812 | 257 | 6,917 | 2,319 | 109,223 | 33,806 | 87,419 | 22,951 | 47,726 | 11,194 | 231,334 | 63,659 | 3,089 | 15,314 | 633 | 11,742 |
| | | Other Government | ... | ... | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated | 11,731 | 856 | 153 | 24 | 505 | 113 | 8,103 | 2,004 | 5,251 | 2,415 | 31,155 | 791 | 30,459 | 5,775 | 234 | 1,205 | 23 | 530 |
| | | Total | 185,020 | 11,584 | 965 | 281 | 7,422 | 2,432 | 117,331 | 35,810 | 92,670 | 25,366 | 478,881 | 11,985 | 261,793 | 69,434 | 3,323 | 16,519 | 656 | 12,272 |
| 11 | Sátára | Rayatwári | 190,577 | 17,268 | 417 | 218 | 4,627 | 951 | 114,302 | 61,343 | 75,743 | 38,096 | 503,542 | 12,669 | 314,433 | 66,786 | 19,698 | 19,132 | 742 | 18,152 |
| | | Other Government | ... | ... | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated | 43,526 | 4,676 | 93 | 58 | 1,501 | 388 | 24,963 | 14,830 | 19,440 | 9,082 | 118,557 | 2,349 | 57,057 | 15,113 | 5,795 | 4,549 | 173 | 3,946 |
| | | Total | 234,103 | 21,944 | 510 | 276 | 6,128 | 1,339 | 139,265 | 76,173 | 95,183 | 47,178 | 622,099 | 15,018 | 371,490 | 81,899 | 25,493 | 23,681 | 915 | 22,098 |
| | *III.—Karnâtak.* | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 136,036 | 36,650 | 3,845 | 788 | 7,856 | 1,175 | 89,071 | 62,873 | 76,430 | 41,930 | 456,654 | 5,476 | 166,378 | 72,453 | 45,605 | 9,456 | 405 | 23,377 |
| | | Other Government | ... | ... | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated | 31,071 | 6,361 | 476 | 101 | 1,305 | 213 | 19,213 | 14,292 | 16,390 | 9,168 | 98,590 | 2,010 | 50,083 | 15,022 | 7,324 | 2,549 | 74 | 3,770 |
| | | Total | 167,107 | 43,011 | 4,321 | 889 | 9,161 | 1,388 | 108,284 | 77,165 | 92,820 | 51,098 | 555,244 | 7,486 | 216,461 | 87,475 | 52,929 | 12,005 | 479 | 27,147 |
| 13 | Bijápur | Rayatwári | 170,757 | 9,512 | 547 | 137 | 5,209 | 3,578 | 112,228 | 52,527 | 134,782 | 45,087 | 534,364 | 10,343 | 188,350 | 126,682 | 39,062 | 10,701 | 165 | 12,199 |
| | | Other Government | ... | ... | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated | 23,030 | 1,295 | 32 | 16 | 475 | 546 | 15,679 | 7,132 | 18,785 | 6,009 | 72,999 | 1,135 | 26,929 | 19,420 | 6,379 | 1,106 | 14 | 1,351 |
| | | Total | 193,787 | 10,807 | 579 | 153 | 5,684 | 4,124 | 127,907 | 59,659 | 153,567 | 51,096 | 607,363 | 11,478 | 215,279 | 146,102 | 45,441 | 11,807 | 179 | 13,550 |
| 14 | Dhárwár | Rayatwári | 196,803 | 23,435 | 467 | 263 | 11,505 | 1,763 | 103,622 | 72,199 | 131,052 | 59,189 | 600,298 | 5,048 | 127,924 | 96,216 | 87,519 | 5,174 | 531 | 43,539 |
| | | Other Government | 29 | 1 | .. | .. | .. | .. | 27 | 12 | 58 | 10 | 137 | .. | .. | .. | 12 | .. | .. | 2 |
| | | Alienated | 14,499 | 2,983 | 22 | 13 | 670 | 35 | 9,173 | 4,951 | 10,533 | 4,105 | 47,014 | 383 | 4,708 | 5,870 | 6,913 | 269 | 17 | 2,899 |
| | | Total | 211,331 | 26,419 | 489 | 276 | 12,175 | 1,798 | 112,822 | 77,192 | 141,643 | 63,304 | 647,449 | 5,431 | 132,632 | 102,086 | 94,444 | 5,443 | 548 | 46,440 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 108,408 | 45,850 | 678 | 155 | 5,234 | 493 | 108,616 | 22,164 | 95,167 | 17,607 | 404,372 | 1,158 | 3,356 | 36,203 | 79,460 | .. | 4,049 | 23,454 |
| | | Other Government | 255 | 75 | 219 | 7 | .. | .. | 679 | 51 | 108 | 32 | 1,426 | 120 | 210 | 100 | 123 | .. | 13 | 58 |
| | | Alienated | 3,525 | 684 | .. | .. | 52 | 13 | 1,660 | 492 | 1,298 | 235 | 7,959 | 13 | 17 | 484 | 1,813 | .. | 116 | 899 |
| | | Total | 112,188 | 46,609 | 897 | 162 | 5,286 | 506 | 110,955 | 22,707 | 96,573 | 17,874 | 413,757 | 1,291 | 3,583 | 36,787 | 81,396 | ... | 4,178 | 24,411 |
| 16 | Kolába | Rayatwári | 35,893 | 18,525 | 229 | 155 | 2,342 | 672 | 31,267 | 11,296 | 27,657 | 8,310 | 136,346 | 437 | 847 | 14,633 | 24,381 | .. | 1,029 | 4,306 |
| | | Other Government | 29,331 | 11,249 | 245 | 72 | 507 | 101 | 24,468 | 6,623 | 17,856 | 4,186 | 94,638 | 91 | 596 | 9,024 | 19,278 | .. | 101 | 672 |
| | | Alienated | 275 | 289 | 2 | 3 | 5 | 8 | 277 | 74 | 234 | 40 | 1,207 | 1 | 18 | 78 | 271 | .. | 8 | 14 |
| | | Total | 65,499 | 30,063 | 476 | 230 | 2,854 | 781 | 56,012 | 17,993 | 45,747 | 12,536 | 232,191 | 529 | 1,461 | 23,735 | 43,930 | ... | 1,138 | 4,992 |
| 17 | Ratnágiri | Rayatwári | 12,956 | 2,777 | 49 | 26 | 1,407 | 196 | 6,845 | 2,050 | 3,353 | 1,379 | 31,638 | 50 | 267 | 2,530 | 7,843 | .. | 29 | 821 |
| | | Other Government | 83,286 | 14,951 | 527 | 41 | 509 | 331 | 48,235 | 11,947 | 20,611 | 5,197 | 185,635 | 155 | 2,665 | 16,803 | 49,126 | .. | 109 | 405 |
| | | Alienated | 3,190 | 755 | 5 | 2 | 1 | 1 | 1,781 | 800 | 1,146 | 474 | 8,155 | 10 | 12 | 996 | 1,915 | .. | .. | 22 |
| | | Total | 99,432 | 18,483 | 581 | 69 | 1,917 | 528 | 56,861 | 15,397 | 25,110 | 7,050 | 225,428 | 215 | 2,944 | 20,329 | 58,884 | ... | 138 | 1,248 |
| 18 | Kánara | Rayatwári | 75,978 | 26,269 | 4,819 | 588 | 5,362 | 875 | 74,092 | 25,040 | 50,851 | 10,291 | 274,133 | 361 | 1,421 | 3,415 | 45,443 | .. | 116 | 5,606 |
| | | Other Government | ... | ... | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Alienated | ... | ... | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | Total | 75,978 | 26,237 | 4,819 | 588 | 5,362 | 875 | 74,092 | 25,040 | 50,851 | 10,291 | 274,133 | 361 | 1,421 | 3,415 | 45,443 | ... | 116 | 5,606 |
| | Total A. | Rayatwári | 2,433,219 | 233,887 | 21,535 | 5,082 | 107,389 | 18,466 | 1,565,129 | 745,516 | 1,269,414 | 484,221 | 6,883,858 | 120,730 | 1,748,154 | 991,812 | 719,419 | 165,133 | 75,641 | 336,185 |
| | | Other Government | 230,163 | 26,589 | 1,443 | 599 | 2,986 | 757 | 143,852 | 90,078 | 83,368 | 46,325 | 626,160 | 4,716 | 32,753 | 55,674 | 126,650 | 375 | 1,349 | 22,581 |
| | | Alienated | 242,361 | 20,017 | 1,273 | 360 | 8,253 | 1,701 | 147,780 | 63,799 | 115,977 | 40,857 | 642,378 | 12,992 | 240,864 | 100,798 | 50,137 | 21,618 | 3,367 | 24,579 |
| | | Grand Total | 2,905,743 | 280,493 | 24,251 | 6,041 | 118,628 | 20,924 | 1,856,761 | 899,393 | 1,468,759 | 571,403 | 8,152,396 | 138,438 | 2,021,771 | 1,148,284 | 896,206 | 187,126 | 80,357 | 383,345 |
| | B.—SIND. | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | Not available. | | | | | | | | | | | | | | | | | |
| 20 | Hyderabad | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur | | | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar | | | | | | | | | | | | | | | | | | | |

## Accompaniment A. to Return III.

*Details of Kharíf and Rabi under Cereals and Pulses, 1888-89.*

| No. | District. | | Class I.—(Cereals). | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári. | Bájri. | Rice. | Wheat. | Barley. | Maize. | Kodra. | Rági. | Rále. | Vari. | Banti. | Bhádli. | Rájgira. | Others. | Total Cereals. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... | Kharíf ... | 325,094 | 232,715 | 25,004 | ..... | ..... | 5,125 | 19,663 | 9,693 | ..... | 4,819 | 24,735 | ..... | ..... | ..... | 646,84 |
| | | Rabi ... ... | ..... | ..... | ..... | 183,657 | 34,102 | ..... | ..... | ..... | 845 | ..... | ..... | ..... | 38 | ..... | 218,642 |
| | | Total ... | 325,094 | 232,715 | 25,004 | 183,657 | 34,102 | 5,125 | 19,663 | 9,693 | 845 | 4,819 | 24,735 | ... | 38 | ... | 865,490 |
| 2 | Kaira ... ... | Kharíf ... | 63,207 | 229,502 | 81,545 | ..... | ..... | 570 | 111,727 | 61,706 | ..... | ..... | 1,523 | ..... | ..... | 24 | 549,804 |
| | | Rabi ... ... | 1,779 | 50 | ..... | 31,037 | 10,702 | 25 | ..... | ..... | 570 | 1,630 | 63 | ..... | 270 | ..... | 46,126 |
| | | Total ... | 64,986 | 229,552 | 81,545 | 31,037 | 10,702 | 595 | 111,727 | 61,706 | 570 | 1,630 | 1,586 | ... | 270 | 24 | 595,930 |
| 3 | Panch Maháls ... | Kharíf ... | 2,895 | 44,056 | 48,502 | ..... | ..... | 90,989 | 20,545 | 15,073 | 13 | 2,748 | 14,791 | 359 | 6 | 1,172 | 241,149 |
| | | Rabi ... ... | ..... | ..... | ..... | 999 | 239 | 40 | ..... | ..... | ..... | 30 | 7 | ..... | ..... | ..... | 1,315 |
| | | Total ... | 2,895 | 44,056 | 48,502 | 999 | 239 | 91,029 | 20,545 | 15,073 | 13 | 2,778 | 14,798 | 359 | 6 | 1,172 | 242,464 |
| 4 | Broach ... ... | Kharíf ... | 19,721 | 18,120 | 16,147 | 2 | ..... | 20 | 8,178 | 454 | 5 | 369 | ..... | ..... | 5 | 2 | 63,023 |
| | | Rabi ... ... | 148,578 | 78 | ..... | 15,189 | ..... | ..... | 5 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 163,851 |
| | | Total ... | 168,299 | 18,198 | 16,147 | 15,191 | ... | 20 | 8,183 | 454 | 5 | 369 | ... | ... | 6 | 2 | 226,874 |
| 5 | Surat ... ... | Kharíf ... | 127,408 | 8,133 | 96,197 | ..... | ..... | 1 | 43,393 | 11,865 | ..... | 88 | 1,240 | 76 | 26 | 228 | 288,655 |
| | | Rabi ... ... | 5,489 | ..... | ..... | 11,690 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 17,179 |
| | | Total ... | 132,897 | 8,133 | 96,197 | 11,690 | ... | 1 | 43,393 | 11,865 | ... | 88 | 1,240 | 76 | 26 | 228 | 305,834 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Kharíf ... | 533,564 | 604,977 | 26,374 | ..... | ..... | 2,312 | 4,909 | 12,851 | 278 | 4,958 | 3,034 | 1,055 | 105 | 28 | 1,194,445 |
| | | Rabi ... ... | ..... | ..... | ..... | 333,119 | 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 333,124 |
| | | Total ... | 533,564 | 604,977 | 26,374 | 333,119 | 5 | 2,312 | 4,909 | 12,851 | 278 | 4,958 | 3,034 | 1,055 | 105 | 28 | 1,527,569 |
| 7 | Násik ... ... | Kharíf ... | 58,542 | 612,602 | 48,322 | ..... | ..... | 4,221 | ..... | 152,108 | 1,602 | 44,788 | ..... | 2,315 | 82 | ..... | 924,582 |
| | | Rabi ... ... | 117,083 | ..... | ..... | 378,273 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ..... | 495,356 |
| | | Total ... | 175,625 | 612,602 | 48,322 | 378,273 | ... | 4,221 | ... | 152,108 | 1,602 | 44,788 | ... | 2,315 | 82 | ... | 1,419,938 |
| 8 | Ahmadnagar ... | Kharíf ... | ..... | 415,649 | 9,906 | ..... | 139 | 3,005 | 119 | 28,229 | 729 | 12,120 | 7 | 6,340 | ..... | 1,336 | 477,579 |
| | | Rabi ... ... | 1,436,111 | ..... | ..... | 277,132 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 260 | ..... | 1,713,503 |
| | | Total ... | 1,436,111 | 415,649 | 9,906 | 277,132 | 139 | 3,005 | 119 | 28,229 | 729 | 12,120 | 7 | 6,340 | 260 | 1,336 | 2,191,082 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... | Kharif ... | ..... | 610,728 | 63,099 | ..... | ..... | 2,125 | 20 | 56,576 | 1,424 | 36,738 | 11 | 7,737 | 119 | 2,677 | 781,254 |
| | | Rabi ... | 853,221 | ..... | ..... | 117,506 | 2,222 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 972,949 |
| | | Total ... | 853,221 | 610,728 | 63,099 | 117,506 | 2,222 | 2,125 | 20 | 56,576 | 1,424 | 36,738 | 11 | 7,737 | 119 | 2,677 | 1,754,203 |
| 10 | Sholápur... | Kharif ... | ..... | 181,835 | 20,992 | ..... | ..... | 13,279 | 1 | 19 | 1,000 | 1,669 | ..... | 148 | 28 | 7,948 | 226,919 |
| | | Rabi ... | 1,428,820 | ..... | ..... | 53,163 | 1,185 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,483,168 |
| | | Total ... | 1,428,820 | 181,835 | 20,992 | 53,163 | 1,185 | 13,279 | 1 | 19 | 1,000 | 1,669 | ... | 148 | 28 | 7,948 | 1,710,087 |
| 11 | Sátára ... | Kharif ... | 269,567 | 498,571 | 41,068 | ..... | ..... | 2,266 | 148 | 66,859 | 31,656 | 46,765 | 28 | ..... | 621 | 2,063 | 959,612 |
| | | Rabi ... | 355,372 | ..... | ..... | 69,303 | 5,771 | 6,620 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 460 | 437,526 |
| | | Total ... | 624,939 | 498,571 | 41,068 | 69,303 | 5,771 | 8,886 | 148 | 66,859 | 31,656 | 46,765 | 28 | ... | 621 | 2,523 | 1,397,138 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Kharif ... | 477,925 | 116,142 | 110,008 | ..... | 4 | 4,545 | 261 | 54,836 | 78,120 | 29,257 | 173 | ..... | 2 | ..... | 871,273 |
| | | Rabi ... | 280,799 | ..... | ..... | 124,599 | 275 | 2,303 | ..... | ..... | 1,948 | ..... | ..... | ..... | ..... | ..... | 409,924 |
| | | Total ... | 758,724 | 116,142 | 110,008 | 124,599 | 279 | 6,848 | 261 | 54,836 | 80,068 | 29,257 | 173 | ... | 2 | ... | 1,281,197 |
| 13 | Bijápur ... | Kharif ... | 526,175 | 267,036 | 10,402 | ..... | ..... | 582 | 47 | 131 | 25,413 | 7,622 | ..... | ..... | 9 | ..... | 837,417 |
| | | Rabi ... | 871,672 | ..... | ..... | 205,899 | 2 | 91 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5 | 1,077,669 |
| | | Total ... | 1,397,847 | 267,036 | 10,402 | 205,899 | 2 | 673 | 47 | 131 | 25,413 | 7,622 | ... | ... | 9 | 5 | 1,915,086 |
| 14 | Dhárwár ... | Kharif ... | 461,676 | 5,115 | 151,311 | ..... | 15 | 29 | 53 | 48,438 | 79,571 | 34,224 | 1 | ..... | 2 | ..... | 780,435 |
| | | Rabi ... | 144,141 | ..... | ..... | 276,735 | ..... | ..... | ..... | ..... | 4,151 | 108 | ..... | ..... | ..... | ..... | 425,135 |
| | | Total ... | 605,817 | 5,115 | 151,311 | 276,735 | 15 | 29 | 53 | 48,438 | 83,722 | 34,332 | 1 | ... | 2 | ... | 1,205,570 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Kharif ... | 73 | 13 | 331,467 | 143 | ..... | 69 | 14,051 | 70,717 | ..... | 31,842 | ..... | ..... | ..... | ..... | 448,375 |
| | | Rabi ... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| | | Total ... | 73 | 13 | 331,467 | 144 | ... | 69 | 14,051 | 70,717 | ... | 31,842 | ... | ... | ... | ... | 448,376 |
| 16 | Kolába ... | Kharif ... | ..... | ..... | 199,970 | ..... | ..... | ..... | 26,696 | 61,099 | 8 | 50,232 | ..... | ..... | ..... | ..... | 338,005 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 199,970 | ... | ... | ... | 26,696 | 61,099 | 8 | 50,232 | ... | ... | ... | ... | 338,005 |
| 17 | Ratnágiri... | Kharif ... | ..... | ..... | 141,273 | ..... | ..... | ..... | 100,973 | 118,438 | 1 | 72,210 | ..... | ..... | ..... | ..... | 432,895 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 141,273 | ... | ... | ... | 100,973 | 118,438 | 1 | 72,210 | ... | ... | ... | ... | 432,895 |
| 18 | Kánara ... | Kharif ... | 782 | ..... | 169,352 | ..... | ..... | 15 | 2 | 7,058 | 202 | 381 | ..... | ..... | ..... | ..... | 177,792 |
| | | Rabi ... | ..... | ..... | 14,342 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 14,342 |
| | | Total ... | 782 | ... | 183,694 | ... | ... | 15 | 2 | 7,058 | 202 | 381 | ... | ... | ... | ... | 192,134 |
| | Grand Total ... | Kharif ... | 2,866,629 | 3,845,194 | 1,590,939 | 145 | 158 | 129,153 | 350,786 | 776,150 | 220,022 | 380,830 | 45,543 | 18,030 | 1,005 | 15,478 | 10,240,062 |
| | | Rabi ... | 5,643,065 | 128 | 14,342 | 2,078,302 | 54,503 | 9,079 | 5 | ..... | 7,514 | 1,768 | 70 | ..... | 569 | 465 | 7,809,810 |
| | | Total ... | 8,509,694 | 3,845,322 | 1,605,281 | 2,078,447 | 54,661 | 138,232 | 350,791 | 776,150 | 227,536 | 382,598 | 45,613 | 18,030 | 1,574 | 15,943 | 18,049,872 |

## ACCOMPANIMENT A. TO RETURN III—*continued.*

*Details of Kharíf and Rabi under Cereals and Pulses, 1888-89.*

| No. | District. | | CLASS II.—(PULSES). | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur. | Gram. | Mug. | Udid. | Math. | Val. | Chavli. | Kulith. | Vátána. | Lentil (Masur). | Lákh (Lang). | Field Vetch (Guvár). | Others. | Total Pulses. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... ... | Kharif ... ... | 842 | ..... | 7,594 | 3,314 | 39,176 | 16 | 423 | 7,664 | ..... | ..... | ..... | 62,19 | ..... | 65,248 |
| | | Rabi ... ... | ..... | 37,654 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 37,654 |
| | | Total ... | 842 | 37,654 | 7,594 | 3,314 | 39,176 | 16 | 423 | 7,664 | ... | ... | ... | 6,219 | ... | 102,902 |
| 2 | Kaira ... ... ... | Kharif ... ... | 21,583 | ..... | 3,051 | 563 | 22,735 | 565 | 2,370 | ..... | ..... | ..... | ..... | 8,999 | ..... | 59,866 |
| | | Rabi ... ... | ..... | 3,341 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3,341 |
| | | Total ... | 21,583 | 3,341 | 3,051 | 563 | 22,735 | 565 | 2,370 | ... | ... | ... | ... | 8,999 | ... | 63,207 |
| 3 | Panch Maháls ... ... | Kharif ... ... | 4,229 | ..... | 3,048 | 4,630 | 3,180 | 31 | 272 | 24 | ..... | ..... | ..... | 770 | ..... | 16,184 |
| | | Rabi ... ... | ..... | 4,864 | ..... | ..... | ..... | ..... | ..... | ..... | 81 | ..... | ..... | ..... | ..... | 4,945 |
| | | Total ... | 4,229 | 4,864 | 3,048 | 4,630 | 3,180 | 31 | 272 | 24 | 81 | ... | ... | 770 | ... | 21,129 |
| 4 | Broach ... ... ... | Kharif ... ... | 3,667 | ..... | 199 | 7 | 883 | 476 | 129 | ..... | ..... | ..... | ..... | 182 | ..... | 5,543 |
| | | Rabi ... ... | 9,486 | 244 | 74 | 1 | 34 | 271 | 20 | ..... | 1,394 | ..... | 28,237 | 40 | ..... | 39,801 |
| | | Total ... | 13,153 | 244 | 273 | 8 | 917 | 747 | 149 | ... | 1,394 | ... | 28,237 | 222 | ... | 45,344 |
| 5 | Surat ... ... ... | Kharif ... ... | 20,031 | ..... | 2,453 | 1,905 | 571 | ..... | 593 | ..... | ..... | 5 | 9 | 763 | ..... | 26,330 |
| | | Rabi ... ... | 2,556 | 1,996 | 57 | ..... | ..... | 10,104 | ..... | ..... | 725 | 6 | 600 | 639 | ..... | 16,683 |
| | | Total ... | 22,587 | 1,996 | 2,510 | 1,905 | 571 | 10,104 | 593 | ... | 725 | 11 | 609 | 1,402 | ... | 43,013 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | Kharif ... ... | 53,592 | ..... | 4,039 | 20,712 | 2,923 | 206 | 621 | 50,947 | ..... | 843 | 108 | ..... | ..... | 133,991 |
| | | Rabi ... ... | ..... | 49,207 | ..... | ..... | ..... | ..... | ..... | ..... | 1,967 | ..... | ..... | ..... | ..... | 51,174 |
| | | Total ... | 53,592 | 49,207 | 4,039 | 20,712 | 2,923 | 206 | 621 | 50,947 | 1,967 | 843 | 108 | ... | ... | 185,165 |
| 7 | Násik ... ... ... | Kharif ... ... | 17,747 | ..... | 713 | 25,690 | 750 | 15 | 11 | 59,638 | ..... | ..... | ..... | ..... | ..... | 104,564 |
| | | Rabi ... ... | ..... | 85,229 | ..... | ..... | ..... | ..... | ..... | ..... | 2,256 | 8,882 | 3,370 | ..... | ..... | 99,737 |
| | | Total ... | 17,747 | 85,229 | 713 | 25,690 | 750 | 15 | 11 | 59,638 | 2,256 | 8,882 | 3,370 | ... | ... | 204,301 |
| 8 | Ahmadnagar ... ... | Kharif ... ... | 20,498 | ..... | 4,683 | 4,070 | 9,875 | 1,390 | 62 | 29,254 | 1,359 | 364 | ..... | ..... | ..... | 71,555 |
| | | Rabi ... ... | ..... | 135,686 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 9 | ..... | ..... | 135,695 |
| | | Total ... | 20,498 | 135,686 | 4,683 | 4,070 | 9,875 | 1,390 | 62 | 29,254 | 1,359 | 364 | 9 | ... | ... | 207,250 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... ... | Kharif ... ... | 27,172 | ..... | 2,300 | 5,003 | 23,905 | ..... | 340 | 29,366 | ..... | ..... | ..... | ..... | ..... | 88,086 |
| | | Rabi ... ... | ..... | 79,787 | ..... | ..... | ..... | 5,211 | ..... | ..... | 1,802 | 1,482 | ..... | ..... | ..... | 88,282 |
| | | Total ... | 27,172 | 79,787 | 2,300 | 5,003 | 23,905 | 5,211 | 340 | 29,366 | 1,802 | 1,482 | ... | ... | ... | 176,368 |
| 10 | Sholápur ... ... | Kharif ... ... | 59,462 | ..... | 2,728 | 393 | 21,910 | ..... | 13 | 5,718 | ..... | ..... | 359 | ..... | ..... | 90,583 |
| | | Rabi ... ... | ..... | 67,238 | ..... | ..... | ..... | 74 | ..... | ..... | 2 | 38 | ..... | ..... | ..... | 67,352 |
| | | Total ... | 59,462 | 67,238 | 2,728 | 393 | 21,910 | 74 | 13 | 5,718 | 2 | 38 | 359 | ... | ... | 157,935 |
| 11 | Sátára ... ... ... | Kharif ... ... | 55,223 | ..... | 15,383 | 32,910 | 53,566 | 3,161 | 303 | 45,637 | ..... | 534 | ..... | ..... | 29 | 206,746 |
| | | Rabi ... ... | ..... | 96,583 | ..... | ..... | ..... | 1,430 | ..... | ..... | 1,342 | ..... | ..... | ..... | ..... | 99,355 |
| | | Total ... | 55,223 | 96,583 | 15,383 | 32,910 | 53,566 | 4,591 | 303 | 45,637 | 1,342 | 534 | ... | ... | 29 | 306,101 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum... ... ... | Kharif ... ... | 54,377 | ..... | 8,367 | 5,055 | 4,353 | 182 | 208 | 50,800 | ..... | ..... | ..... | ..... | ..... | 123,342 |
| | | Rabi ... ... | ..... | 58,665 | ..... | ..... | ..... | 6,486 | ..... | ..... | 5,263 | 5,755 | ..... | ..... | ..... | 76,169 |
| | | Total ... | 54,377 | 58,665 | 8,367 | 5,055 | 4,353 | 6,668 | 208 | 50,800 | 5,263 | 5,755 | ... | ... | ... | 199,511 |
| 13 | Bijápur ... ... ... | Kharif ... ... | 89,963 | ..... | 37,666 | 8 | 6,882 | 4,173 | 4,461 | 33,151 | ..... | ..... | ..... | ..... | ..... | 176,304 |
| | | Rabi ... ... | 4 | 57,225 | 1 | ..... | ..... | 535 | ..... | 7 | 29 | ..... | ..... | ..... | ..... | 57,801 |
| | | Total ... | 89,967 | 57,225 | 37,667 | 8 | 6,882 | 4,708 | 4,461 | 33,158 | 29 | ... | ... | ... | ... | 234,105 |
| 14 | Dhárwár ... ... ... | Kharif ... ... | 55,584 | 70 | 38,418 | 5,604 | 10,491 | 4,460 | 1,279 | 46,284 | ..... | ..... | ..... | ..... | ..... | 162,190 |
| | | Rabi ... ... | 1 | 46,592 | 4,617 | 580 | ..... | 2,051 | ..... | 6,005 | 655 | 92 | ..... | ..... | ..... | 60,593 |
| | | Total ... | 55,585 | 46,662 | 43,035 | 6,184 | 10,491 | 6,511 | 1,279 | 52,289 | 655 | 92 | ... | ... | ... | 222,783 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... | Kharif ... ... | 6,558 | ..... | 454 | 22,024 | ..... | 93 | 3,972 | 851 | ..... | ..... | ..... | ..... | ..... | 33,952 |
| | | Rabi ... ... | 195 | 2,633 | 103 | 12 | ..... | 3,621 | 1 | ..... | 17 | ..... | 91 | ..... | ..... | 6,673 |
| | | Total ... | 6,753 | 2,633 | 557 | 22,036 | ... | 3,714 | 3,973 | 851 | 17 | ... | 91 | ... | ... | 40,625 |
| 16 | Kolába ... ... ... | Kharif ... ... | 322 | ..... | ..... | 2,288 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2,610 |
| | | Rabi ... ... | 2,238 | 3,587 | 2,306 | 7,170 | ..... | 6,435 | 67 | ..... | ..... | ..... | ..... | ..... | ..... | 21,803 |
| | | Total ... | 2,560 | 3,587 | 2,306 | 9,458 | ... | 6,435 | 67 | ... | ... | ... | ... | ... | ... | 24,413 |
| 17 | Ratnágiri ... ... | Kharif ... ... | 2,602 | 116 | 1,347 | 9,185 | ..... | 8,863 | 165 | 11,255 | ..... | ..... | ..... | ..... | ..... | 33,533 |
| | | Rabi ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,602 | 116 | 1,347 | 9,185 | ... | 8,863 | 165 | 11,255 | ... | ... | ... | ... | ... | 33,533 |
| 18 | Kánara ... ... ... | Kharif ... ... | 105 | ..... | 20 | 281 | ..... | 95 | 4 | 1,961 | ..... | ..... | ..... | ..... | ..... | 2,466 |
| | | Rabi ... ... | ..... | 287 | 1,172 | 1,240 | ..... | 8 | 558 | 330 | 415 | 1 | ..... | ..... | 116 | 4,127 |
| | | Total ... | 105 | 287 | 1,192 | 1,521 | ... | 103 | 562 | 2,291 | 415 | 1 | ... | ... | 116 | 6,593 |
| | Grand Total ... | Kharif ... ... | 493,557 | 186 | 132,463 | 143,642 | 201,200 | 23,726 | 15,226 | 3,72,550 | 1,359 | 1,746 | 476 | 16,933 | 29 | 1,403,093 |
| | | Rabi ... ... | 14,480 | 730,818 | 8,330 | 9,003 | 34 | 36,226 | 646 | 6,342 | 15,948 | 16,256 | 32,307 | 679 | 116 | 871,185 |
| | | Total ... | 508,037 | 731,004 | 140,793 | 152,645 | 201,234 | 59,952 | 15,872 | 378,892 | 17,307 | 18,002 | 32,783 | 17,612 | 145 | 2,274,278 |

## Accompaniment B. to Return III.

*Number of principal Fruit-bearing Trees, 1888-89.*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy Palm. | Date Palm. |
|---|---|---|---|---|---|---|---|
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad... ... | 46,390 | 10,930 | ... | ... | 44 | ... |
| 2 | Kaira ... ... | 207,792 | 24,657 | ... | 32 | 15 | ... |
| 3 | Panch Mahále ... | 33,984 | 4,679 | ... | ... | 128,097 | ... |
| 4 | Broach ... ... | 20,135 | 5,571 | ... | 20 | 6,419 | 350 |
| 5 | Surat ... ... | 177,992 | 70,614 | 3,399 | 6,291 | 67,810 | 698,110 |
| | Total ... | 486,293 | 116,451 | 3,399 | 6,343 | 202,385 | 698,460 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 188,683 | 8,209 | 1 | 113 | 131 | 1,276 |
| 7 | Násik ... ... | 175,573 | 7,310 | 117 | 157 | 68 | 46,779 |
| 8 | Ahmadnagar ... | 65,452 | 8,608 | 16 | 265 | 1,376 | ... |
| 9 | Poona ... ... | 113,510 | 7,215 | 643 | 1,072 | 8,175 | ... |
| 10 | Sholápur ... ... | 30,586 | 6,704 | ... | 149 | 2 | 66,848 |
| 11 | Sátára ... ... | 167,436 | 10,935 | 8,917 | 1,636 | ... | ... |
| | Total ... | 741,240 | 48,981 | 9,694 | 3,392 | 9,752 | 114,903 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 112,856 | 19,691 | 10,435 | 1,844 | ... | 65,420 |
| 13 | Bijápur ... ... | 71,604 | 25,414 | 46 | 1,849 | 97 | 433,807 |
| 14 | Dhárwár ... ... | 162,874 | 52,509 | 7,789 | 65,981 | 8 | 437,115 |
| | Total ... | 347,334 | 97,614 | 18,270 | 69,674 | 105 | 936,342 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... | 148,984 | 13,443 | 2,805 | 83,716 | 63,403 | 13,329 |
| 16 | Kolába ... ... | 46,516 | 4,070 | 3,264 | 90,418 | 19,267 | 30 |
| 17 | Ratnágiri ... ... | 93,458 | 4,530 | 66,453 | 316,426 | ... | ... |
| 18 | Kánara ... ... | 116,442 | 13,128 | 86,457 | 1,028,904 | 80 | ... |
| | Total ... | 405,400 | 35,171 | 158,979 | 1,519,464 | 82,750 | 13,359 |
| | Grand Total ... | 1,980,267 | 298,217 | 190,342 | 1,598,873 | 294,992 | 1,763,064 |

# STATISTICS.

## B.—RAINFALL.

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | 1st January—10th April. |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini ... ... | 11th April—24th April. |
| | Bharani ... ... | 25th April—8th May. |
| | Krittika ... ... | 9th May—22nd May. |
| | Rohini ... ... | 23rd May—4th June. |
| Monsoon-Kharíf— | | |
| 5th June to 14th August. | Mrig... ... ... | 5th June—19th June. |
| | Árdra ... ... | 20th June—3rd July. |
| | Punarvasu ... ... | 4th July—17th July. |
| | Pushya ... ... | 18th July—31st July. |
| | Áshlesha ... ... | 1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct.. | Magha ... ... | 15th August—27th August. |
| | Purva ... ... | 28th August—10th September. |
| | Uttara ... ... | 11th September—24th September |
| | Hast ... ... | 25th September—7th October. |
| | Chitra ... ... | 8th October—21st October. |
| Late Rains— | | |
| 22nd Oct. to 30th Nov. ... | Sváti ... ... | 22nd October—3rd November. |
| | Vishákha ... ... | 4th November—17th November. |
| | Anurádha ... ... | 18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1886, except for very few stations. The rainy days are compared with those of the last year.

## West Khándesh, 1888.

| Rain Periods. | Dhulia. | | Pimpalner. | | Nandurba'r. | | Nava'pur. | | Taloda. | | Sha'ha'da. | | Shirpur. | | Sindkheda. | | Amalner. | | Pa'rola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 2·18 | 3 | 2·50 | 6 | 0·87 | 3 | 0·33 | 2 | 0·27 | 2 | 0·51 | 4 | 1·36 | 5 | 1·22 | 4 | 1·22 | 5 | 1·44 | 4 |
| Ante-Monsoon .. | .. | .. | 0·19 | 1 | 0·20 | 1 | 0·11 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·48 | 1 |
| Monsoon-Kharif . | 12·98 | 32 | 4·07 | 27 | 15·36 | 37 | 19·42 | 51 | 14·42 | 39 | 17·93 | 29 | 13·28 | 35 | 7·51 | 23 | 10·68 | 36 | 11·88 | 37 |
| Monsoon-Rabi .. | 3·06 | 18 | 2·85 | 12 | 9·20 | 14 | 10·47 | 16 | 7·72 | 14 | 6·15 | 14 | 8·57 | 17 | 5·7 | 13 | 8·51 | 18 | 4·32 | 13 |
| Late Rains .. .. | 0·32 | 1 | 1·17 | 2 | .. | .. | 0·06 | 1 | 0·04 | 1 | .. | .. | 0·91 | 3 | .. | .. | 1·23 | 3 | 1·15 | 3 |
| Total .. | 18·54 | 54 | 10·78 | 48 | 25·63 | 55 | 30·39 | 71 | 22·45 | 56 | 24·59 | 47 | 24·12 | 60 | 13·80 | 40 | 21·64 | 62 | 19·27 | 58 |
| Average .. | 25·79 | 72 | 27·42 | 74 | 32·67 | 69 | .. | .. | 34·96 | 68 | 31·56 | 71 | 27·56 | 87 | 22·95 | 41 | 28·05 | 60 | 32·08 | 56 |

*General characteristics.*—A hilly and rugged tract except where the wide black soil plains extend on either side of the Tápti and its tributaries. Rainfall very heavy in the dángs.

*Remarks.*—Rain much below average all over the district. Monsoon broke in light showers in 2nd week of June in Mrig, but full sowing rain came in A'rdra at end of June. The July rain, though generally light, was seasonable for kharíf sowings. Magha rain in second fortnight of August was throughout good and generally favourable for standing crops. But the break in September, though occasionally relieved by light showers of Purva and Uttara, was trying. Hast rain in October was also very deficient. All standing crops considerably suffered and much of the rabi area remained unsown. Late rains were also as scant and the rabi season turned out very poor. On the whole season not favourable. Kharíf outturn was only fair in Nandurbár, Taloda, Shirpur and Amalner and estimated at 8—12 annas; elsewhere from 6 to 8 annas. Rabi everywhere poor and estimated at 4—8 annas.

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## East Khándesh, 1888.

| Rain Periods. | Cha'lisgaon. | | Pa'chora. | | Bhadgaon. | | Erandol. | | Chopda. | | Jalgaon. | | Ja'mner. | | Bhusával. | | Edala'ba'd. | | Sa'vda. | | Ya'val. | | Ra'ver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 2·05 | 4 | 1·61 | 4 | 1·37 | 3 | 2·10 | 5 | 1·40 | 5 | 1·49 | 4 | 1·28 | 3 | 1·64 | 4 | 1·40 | 4 | 1·28 | 4 | 1·30 | 2 | 1·81 | 6 |
| Ante-Monsoon .. | .. | .. | .. | .. | .. | .. | 0·92 | 1 | .. | .. | 0·11 | 2 | .. | .. | 0·56 | 1 | 0·35 | 2 | 0·64 | 3 | 0·13 | 1 | 0·07 | 1 |
| Monsoon-Kharif .. | 8·96 | 23 | 13·03 | 33 | 10·00 | 46 | 14·53 | 36 | 11·34 | 41 | 14·73 | 44 | 9·90 | 37 | 10·79 | 24 | 10·11 | 24 | 10·91 | 26 | 9·29 | 26 | 10·02 | 22 |
| Monsoon-Rabi .. | 6·71 | 9 | 5·86 | 16 | 6·71 | 19 | 5·01 | 13 | 6·46 | 21 | 7·10 | 19 | 6·41 | 17 | 6·24 | 11 | 4·94 | 18 | 5·06 | 14 | 5·24 | 12 | 5·51 | 15 |
| Late Rains .. .. | 1·86 | 3 | 1·15 | 4 | 1·18 | 7 | 0·73 | 4 | 0·12 | 2 | 0·27 | 2 | 0·04 | 2 | .. | .. | 0·70 | 2 | 0·34 | 3 | 0·95 | 2 | 0·26 | 1 |
| Total .. | 19·58 | 39 | 21·65 | 57 | 19·26 | 75 | 23·29 | 59 | 19·32 | 69 | 23·70 | 71 | 17·63 | 59 | 19·23 | 40 | 17·50 | 50 | 18·23 | 50 | 16·91 | 43 | 17·67 | 45 |
| Average ... | 29·70 | 85 | 29·51 | 80 | 31·29 | 70 | 31·12 | 84 | 31·58 | 82 | 33·42 | 87 | 34·84 | 65 | 35·18 | 59 | 28·78 | 64 | 28·95 | 74 | 34·44 | 53 | 33·56 | 57 |

*General characteristics.*—In the north, high hills of the Sátpudas. The southern and western portions are also hilly but the hills less high, and continuous. It is drained by the Tápti, the Girna and the Purna. Rainfall larger than in the West Khándesh, but less certain.

*Remarks.*—Rainfall much below average throughout the district. Early rains, though general, were of doubtful value. Ante-monsoon showers were, as usual, insignificant. Regular monsoon set in with Mrig in 2nd week of June, but generally in very light showers and kharíf sowing retarded. Sowing rain came early in July at end of Árdra after some anxiety. The July rain in Punarvasu and Pushya, though seasonable, was insufficient and a heavy fall much needed for growth of crops. The relief came in Magha in 2nd half of August, and crops improved. But the September rain in Purva and Uttara was very deficient, though the Uttara showers gave partial relief. The most important closing showers in Hast in October were scanty. Late rains also were very light. The rabi season was thus poor and sowings not full. Kharíf crops were, however, on the whole much better in East than in West Khándesh; cotton was a full average crop, 12 to 16 annas, except in Chálisgaon where it was 8 annas. Rabi generally poor and estimated at 4—8 annas.

## Násik, 1888.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Niphá'd. | | Yeola. | | Na'ndgáon. | | Ma'legaon. | | Sata'na. | | Kalvan. | | Cha'ndor. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 1·40 | 6 | 1·40 | 4 | 1·48 | 6 | 0·85 | 2 | 2·85 | 6 | 2·77 | 3 | 2·12 | 5 | 1·79 | 5 | 1·08 | 5 | 1·10 | 2 | 0·65 | 6 | 0·47 | 4 |
| Ante-Monsoon .. | 0·93 | 5 | 1·99 | 5 | 1·48 | 5 | 2·35 | 2 | 1·44 | 4 | 1·12 | 4 | 0·86 | 2 | 0·08 | 1 | 0·12 | 1 | 0·65 | 1 | 0·04 | 1 | 0·53 | 3 |
| Monsoon-Kharif .. | 11·20 | 42 | 102·47 | 66 | 9·61 | 47 | 10·18 | 26 | 5·63 | 36 | 8·49 | 30 | 8·65 | 20 | 6·94 | 16 | 9·89 | 39 | 6·54 | 40 | 17·09 | 47 | 49·21 | 61 |
| Monsoon-Rabi .. | 5·44 | 25 | 50·24 | 40 | 7·49 | 28 | 11·74 | 15 | 5·73 | 26 | 7·32 | 18 | 5·91 | 15 | 5·66 | 20 | 9·44 | 20 | 7·96 | 26 | 7·57 | 22 | 27·72 | 30 |
| Late Rains.. .. | 1·02 | 6 | 1·36 | 7 | 1·43 | 5 | 0·70 | 2 | 2·00 | 10 | 1·17 | 4 | 1·94 | 5 | 3·03 | 4 | 0·79 | 4 | 1·34 | 5 | 1·55 | 4 | 0·14 | 2 |
| Total .. | 19·99 | 84 | 157·46 | 122 | 21·49 | 91 | 25·82 | 47 | 17·65 | 82 | 20·87 | 59 | 17·48 | 47 | 17·50 | 46 | 21·32 | 69 | 17·59 | 74 | 26·90 | 80 | 78·07 | 100 |
| Average .. | 33·74 | 98 | 130·08 | 121 | 27·21 | 97 | 22·68 | 79 | 21·88 | 82 | 28·13 | 71 | 25·36 | 71 | 24·11 | 54 | 34·82 | 75 | 29·48 | 73 | 32·43 | 77 | 92·36 | 112 |

*General characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—Rainfall below average everywhere except Igatpuri and Niphád. Early rains, though general, were of doubtful value. Ante-monsoon showers, followed by light showers of the regular monsoon in Mrig (early in June), favoured sowings of Tushár or subordinate crops of udid, mug, &c., in the Desh in east and of sáva, vari, &c., in the Dáng in west. But the general sowings were retarded until the heavy fall of A'rdra, early in July. The subsequent July rain in Punarvasu and Pushya was insufficient and kharíf sowings incomplete in many parts, especially in east. The rainfall in August and 1st half of September was light and particularly trying to standing kharíf in east. Relief came by the heavy fall of Uttara and Hast, especially beneficial in east where the early rains were most deficient. The late rains, though scanty, were favourable for rabi sowings. The season, though greatly varying in character even in villages of the same tálukás, was on the whole unfavourable. The estimate of outturn in Nándgaon, Málegaon and Yeola was very low, from 4 to 6 annas; elsewhere it was from 8 to 12 annas. Rabi was generally poorer than kharif.

## Ahmadnagar, 1888.

| Rain Periods. | 1 Nagar. | | 2 Pa'rner. | | 3 Shrigonda. | | 4 Karjat. | | 5 Ja'mkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Ra'huri. | | 9 Kopargáon. | | 10 Sangamner. | | 11 Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. | 0·98 | 6 | 1·04 | 5 | 1·32 | 7 | 0·55 | 1 | 0·60 | 1 | 2·17 | 6 | 1·22 | 7 | 0·63 | 3 | 2·56 | 4 | 4·55 | 5 | 1·85 | 3 |
| Ante-Monsoon .. .. .. | 0·25 | 4 | 0·48 | 3 | 1·71 | 5 | .. | .. | 1·96 | 5 | 0·06 | 1 | 0·15 | 2 | 0·98 | 1 | 0·15 | 1 | 0·82 | 4 | .. | .. |
| Monsoon-Kharíf .. .. | 4·76 | 19 | 5·62 | 32 | 2·70 | 25 | 7·27 | 14 | 8·61 | 30 | 7·32 | 27 | 9·17 | 29 | 5·42 | 11 | 7·32 | 20 | 5·20 | 34 | 10·04 | 43 |
| Monsoon-Rabi .. .. .. | 9·56 | 22 | 10·11 | 27 | 6·27 | 21 | 6·82 | 11 | 9·12 | 17 | 5·40 | 22 | 6·69 | 22 | 6·61 | 14 | 5·83 | 13 | 9·29 | 26 | 10·06 | 23 |
| Late Rains .. .. .. | 3·71 | 10 | 3·49 | 10 | 4·44 | 10 | 3·03 | 5 | 4·91 | 9 | 5·62 | 11 | 3·34 | 9 | 2·51 | 7 | 2·04 | 5 | 1·73 | 6 | 0·95 | 6 |
| Total .. | 19·26 | 61 | 20·74 | 77 | 16·44 | 68 | 17·67 | 31 | 25·20 | 62 | 20·57 | 67 | 20·57 | 69 | 16·15 | 36 | 17·90 | 43 | 21·59 | 75 | 22·90 | 75 |
| Average .. | 25·11 | 77 | 23·16 | 76 | 21·52 | 70 | 25·38 | 51 | 28·95 | 66 | 26·94 | 81 | 25·42 | 68 | 22·86 | 51 | 18·41 | 44 | 20·86 | 73 | 23·00 | 67 |

*General characteristics.*—*(1) Desh*—Godáveri valley (tálukás 6 to 9): rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukás 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukás 1, 2, 5 and 10 lie between these valleys. Alternation of bare hill and treeless plain with occasional fertile well-wooded tracts. Rain more regular. *(2) Dángs*—Half Akola has very heavy rain. Half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Rain everywhere below average. Ante-monsoon showers were very scanty. Monsoon commenced with Mrig early in June, but the rainfall was very capricious and light. Tushár crops, *i. e.*, mug, udid and other pulses, were sown to much less extent than usual. Subsequent rain in July and August was also very deficient. Kharíf was sown over a limited area all over except Akola, and even in Akola the standing kharíf suffered much by the absence of timely rain. Cattle also suffered from scarcity of fodder. The needed relief came, however, about the end of September in Uttara after great anxiety. The fall in Hast in October was very heavy all over the district and shálu jowári and other rabi crops were sown to the full extent. Late rains in Sváti and Vishákha, though not quite sufficient, were favourable to growing rabi. The outturn of Tushár crops was estimated at from 3 to 6 annas in Jámkhed, Shevgaon, Ráhuri and Akola; elsewhere below 3 annas. The kharíf was poor, the average being 6 to 7 annas, except in Akola where it was 10 annas. As regards rabi, the Collector writes: "The rabi promised very well in many parts, but eventually the grain did not swell for want of moisture, and acres and acres of land were to be seen covered with good to fair crops of *kadbi* but bearing no grain." The outturn of shálu jowári—the principal rabi—was much below the average. Owing, however, to capriciousness of the rainfall the crops were not equally affected, being much better in one village, nay even in one field, than in the neighbouring one.

## Poona, 1888.

| Rain Periods. | Poona. | | Paud. | | Vadgaon. | | Lona'vli. | | Khed. | | Ghoda. | | Junnar. | | Siru'r. | | Sa'svad. | | Supa. | | Ba'ra'mati. | | Inda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 1·10 | 4 | 1·47 | 5 | 0·78 | 4 | 0·90 | 4 | 1·27 | 3 | 1·54 | 7 | 2·15 | 6 | 1·21 | 6 | 1·69 | 6 | 1·07 | 3 | 1·50 | 6 | 1·11 | 7 |
| Ante-Monsoon ... | 2·27 | 8 | 0·52 | 2 | 1·27 | 5 | 1·65 | 1 | 4·57 | 4 | 1·66 | 3 | 2·07 | 3 | 0·92 | 4 | 0·78 | 4 | 0·85 | 2 | 2·04 | 10 | 1·38 | 7 |
| Monsoon-Kharif ... | 14·59 | 43 | 41·66 | 54 | 30·17 | 54 | 117·08 | 69 | 10·89 | 52 | 18·01 | 57 | 19·89 | 49 | 3·30 | 29 | 8·38 | 37 | 2·82 | 11 | 7·17 | 24 | 4·58 | 26 |
| Monsoon-Rabi ... | 13·98 | 26 | 14·84 | 36 | 10·96 | 28 | 26·88 | 45 | 5·26 | 26 | 7·84 | 28 | 11·51 | 25 | 8·99 | 16 | 8·89 | 33 | 6·73 | 18 | 5·55 | 21 | 4·41 | 22 |
| Late Rains ... | 2·08 | 9 | 2·44 | 9 | 2·73 | 10 | 4·09 | 5 | 3·46 | 13 | 2·52 | 9 | 3·62 | 10 | 4·01 | 9 | 3·65 | 11 | 2·64 | 6 | 3·26 | 8 | 6·70 | 9 |
| Total ... | 34·02 | 90 | 60·93 | 106 | 45·91 | 101 | 150·60 | 124 | 25·45 | 98 | 31·57 | 104 | 39·24 | 93 | 18·43 | 64 | 23·39 | 91 | 14·11 | 40 | 19·52 | 69 | 18·18 | 71 |
| Average ... | 31·06 | 80 | 60·16 | 107 | 64·93 | 91 | 158·04 | 122 | 24·66 | 86 | 30·14 | 80 | 28·67 | 76 | 21·73 | 62 | 23·25 | 73 | 20·32 | 42 | 22·72 | 59 | 24·78 | 71 |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli, and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukas are uncertain and irregular like the adjoining tálukás of Sholápur.

*Remarks.*—Rainfall generally up to average in west and below average in east in Sirúr, Supa and Indápur. Preparatory showers generally favourable. Monsoon set in rather early, but Mrig rain in the first half of June was very scanty and sowings retarded. The heavy rain of A'rdra in beginning of July was generally sufficient for kharif sowing in the Desh and rice transplantation in the Mával, which were completed by end of July. August rain, though generally light, was favourable for standing crops in north and west, but in eastern tálukás rain deficient, especially in Supa and Bárámati, where kharif crops almost withered. The break in Purva in 1st half of September was injuriously prolonged everywhere, causing some anxiety which was partially removed by the good fall of Uttara about end of September. The closing showers of Hast in October were throughout good, especially favourable for rabi sowings in east where kharíf rain was deficient. Late rains in Sváti and Vishákha were also favourable in rabi tálukás, though slightly deficient in west where more rain was needed for rice and nágli. On the whole season fair, kharíf outturn estimated at 8—12 ans. Rabi generally good, but poor in parts of Supa, Indápur and Sirúr. Scarcity of fodder was badly felt in east, where reserved forests were thrown open for village cattle.

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## Sholápur, 1888.

| Rain Periods. | Sholápur. | | Bársi. | | Mádha. | | Karmála. | | Pandharpur. | | Sángola. | | Málsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 1·55 | 7 | 1·48 | 8 | 1·45 | 7 | 1·07 | 10 | 1·27 | 5 | 1·06 | 5 | 0·80 | 4 |
| Ante-Monsoon . | 1·83 | 5 | 1·09 | 9 | 6·01 | 12 | 0·98 | 8 | 3·82 | 7 | 1·31 | 5 | 1·58 | 6 |
| Monsoon-Kharíf | 11·59 | 28 | 9·15 | 34 | 7·50 | 26 | 4·41 | 31 | 6·21 | 18 | 4·70 | 14 | 2·98 | 9 |
| Monsoon-Rabi.. | 7·91 | 18 | 5·87 | 24 | 5·19 | 18 | 6·67 | 25 | 11·90 | 21 | 7·22 | 15 | 6·94 | 22 |
| Late Rains ... | 2·93 | 6 | 5·40 | 9 | 2·80 | 9 | 4·36 | 13 | 3·37 | 11 | 2·90 | 6 | 7·43 | 8 |
| Total .. | 25·81 | 64 | 22·99 | 84 | 22·95 | 72 | 17·49 | 87 | 26·57 | 62 | 17·19 | 45 | 19·73 | 49 |
| Average ... | 33·33 | 83 | 32·35 | 99 | 27·89 | 87 | 26·32 | 87 | 27·65 | 75 | 22·99 | 38 | 21·07 | 41 |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Rainfall up to average at Pandharpur; elsewhere much below average. Preparatory showers unusually good at Mádha and Pandharpur. Monsoon commenced early in June but rain not sufficient for general sowings till middle of June. July rain was favourable in beginning, but later on it was very deficient, especially in western tálukas where kharíf area was not full. August was a dry month, and the crops began to wither all over, fodder became scarce and much anxiety felt. Partial relief came with Uttara in 1st half of September, but the heavy rain of Hast at end of September removed all anxiety. The kharíf had passed a stage beyond revival in many parts, but the rabi crops were sown to the full extent. Late rains, especially of Vishákha in November, were favourable for growth of rabi crops. On the whole the season was very poor for kharíf and fair for rabi. The kharíf outturn was estimated at 4—8 ans. in Pandharpur, and elsewere hardly above 2 ans. The rabi yielded 8—14 anna outturn.

## Sátára, 1888.

| Rain Periods. | Sa'ta'ra. | | Koregaon. | | Wa'i. | | Khanda'la | | Medha. | | Malcolm-peth. | | Pa'tan. | | Kara'd. | | Peth. | | Shira'la. | | Dahivadi. | | Vaduj. | | Vita. | | Ta'sgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... .. | 3·23 | 8 | 1·69 | 3 | 2·20 | 7 | 1·87 | 4 | 2·28 | 6 | 4·09 | 6 | 2·28 | 7 | 2·12 | 5 | 2·09 | 8 | 1·78 | 2 | 2·54 | 9 | 2·41 | 4 | 1·16 | 4 | 1·14 | 4 |
| Ante-Monsoon ... | 3·44 | 6 | 1·47 | 5 | 1·52 | 2 | 1·09 | 4 | 1·19 | 4 | 2·43 | 5 | 2·89 | 7 | 6·87 | 13 | 4·40 | 13 | 2·02 | 6 | 1·45 | 3 | 1·32 | 3 | 4·36 | 6 | 0·88 | 5 |
| Monsoon-Kharif ... | 24·36 | 60 | 9·89 | 40 | 14·52 | 55 | 8·34 | 17 | 43·02 | 61 | 205·21 | 71 | 48·26 | 59 | 12·15 | 57 | 7·16 | 43 | 16·68 | 47 | 4·20 | 22 | 3·64 | 33 | 4·86 | 20 | 6·04 | 40 |
| Monsoon-Rabi ... | 17·18 | 35 | 12·43 | 26 | 8·77 | 32 | 6·29 | 15 | 18·11 | 35 | 60·16 | 49 | 18·67 | 24 | 12·41 | 38 | 8·61 | 30 | 8·37 | 21 | 12·70 | 29 | 10·53 | 25 | 6·09 | 27 | 10·89 | 41 |
| Late Rains ... ... | 3·61 | 14 | 1·57 | 7 | 5·07 | 17 | 1·16 | 3 | 3·25 | 12 | 7·01 | 15 | 3·09 | 11 | 2·88 | 9 | 3·76 | 7 | 4·10 | 4 | 3·27 | 8 | 1·81 | 6 | 4·26 | 10 | 7·22 | 6 |
| Total ... | 51·82 | 123 | 27·05 | 81 | 32·08 | 113 | 18·75 | 43 | 67·85 | 118 | 278·90 | 146 | 75·19 | 108 | 36·43 | 122 | 26·02 | 101 | 32·95 | 80 | 24·16 | 71 | 19·71 | 71 | 20·73 | 67 | 26·17 | 96 |
| Average ... | 40·84 | 112 | 27·68 | 67 | 32·47 | 97 | 21·45 | 52 | 70·49 | 99 | 268·08 | 136 | 67·85 | 112 | 31·64 | 112 | 29·43 | 110 | 37·88 | 70 | 20·51 | 69 | 21·85 | 63 | 24·71 | 69 | 28·49 | 71 |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—Rainfall generally up to average, though slightly below in east and above in west. Monsoon set in on 3rd June, generally in light showers except at Karád where heavy rain fell. General sowing rain for kharíf came with A'rdra at end of June. July rain was sufficient and seasonable in west, but scanty and irregular in east where kharíf sowings were incomplete. Magha rain generally favourable though not sufficient in east. The break in Purva, in beginning of September, was beneficial for weeding and bájri sowing in west. Uttara and Hast rains in September were throughout good, especially in eastern tálukás where previous rain was deficient. Rabi sowings favourably completed under light showers in October. Vishákha rain in early November was beneficial to rabi; but cloudy weather and local showers of Anurádha at end of November were harmful, affecting tur and gram in Karád and damaging reaped rice and nágli in Wái. Season on the whole very fair; kharíf outturn estimated at 8—10 annas, and rabi up to average, and especially heavy near the Krishna banks.

## Belgaum, 1888.

| Rain Periods. | Belgaum. | | Chandgad | | Kha'na'-pur. | | Sampgaon. | | Saundatti. | | Murgod. | | Goka'k. | | Chikodi. | | Hukeri. | | Athni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 1·08 | 8 | 1·09 | 5 | 1·21 | 4 | 0·77 | 5 | 0·49 | 1 | 0·60 | 2 | 0·62 | 4 | 1·10 | 2 | 1·10 | 2 | 0·59 | 4 |
| Ante-Monsoon ... ... | 3·88 | 11 | 2·48 | 7 | 6·83 | 12 | 8·03 | 13 | 5·37 | 14 | 3·04 | 10 | 3·17 | 13 | 3·06 | 8 | 4·72 | 8 | 5·48 | 10 |
| Monsoon-Kharif ... ... | 25·58 | 65 | 88·20 | 66 | 50·70 | 67 | 9·60 | 39 | 5·50 | 39 | 5·12 | 26 | 4·79 | 37 | 9·09 | 46 | 5·53 | 24 | 3·40 | 25 |
| Monsoon-Rabi ... ... | 14·30 | 40 | 23·87 | 27 | 19·35 | 31 | 12·94 | 28 | 15·98 | 29 | 15·64 | 30 | 14·45 | 30 | 5·90 | 23 | 13·69 | 29 | 13·92 | 31 |
| Late Rains ... ... | 0·97 | 10 | 2·75 | 3 | 1·72 | 6 | 1·79 | 4 | 6·15 | 11 | 1·93 | 3 | 3·10 | 9 | 2·28 | 5 | 2·50 | 5 | 5·99 | 5 |
| Total ... | 45·81 | 134 | 118·39 | 108 | 79·81 | 120 | 33·13 | 89 | 33·49 | 94 | 26·33 | 71 | 26·13 | 93 | 21·43 | 84 | 27·54 | 68 | 29·38 | 75 |
| Average ... | 46·80 | 135 | 95·98 | 123 | 64·68 | 73 | 28·14 | 100 | 24·47 | 97 | 24·40 | 69 | 23·79 | 89 | 27·65 | 96 | 21·60 | 62 | 24·42 | 96 |

*General characteristics.*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—Rainfall generally above, but below the average at Chikodi. Ante-monsoon showers, mostly in Rohini at the end of May, were favourable for early sowings of rice, &c. Monsoon began with Mrig in 2nd week of June, but, except in south-west, the fall was very deficient and kharíf sowings retarded. July rain was seasonable and sufficient for transplantation of rice and nágli in south-west, but scanty in north and east where kharíf sowings incomplete. Magha rain in 2nd half of August was abundant in south-west but the fall of both Magha and Purva in August was very light in north-east, where young kharíf suffered and scarcity of fodder felt. Here the needed relief came with Uttara rain in September. The Hast rain, early in October, was also heavy and beneficial throughout for standing kharíf and rabi sowing. Cotton sowing was well completed under subsequent break in October. Vishákha rain in November, though excessive for wheat seedlings in Saundatti and Athni, was beneficial to growth of young cotton and for further sowings of wheat and gram. Season on the whole fair. Outturn of rice good (14 annas) in south and west where kharíf rain was favourable; jowári and bájri fair (6—12 annas) in the transition tract, *i. e.* Chikodi, Gokák and Parasgad tálukás; elsewhere kharíf was very poor. Rabi yielded fair outturn all over, estimated at 8—10 annas.

## Bijápur, 1888.

| Rain Periods. | Bija'pur. | | Indi. | | Sindgi. | | Ba'geva'di. | | Mudde-biha'l. | | Ba'galkot. | | Bilgi. | | Ba'da'mi | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. .. | 0·83 | 6 | 1·02 | 7 | .. | .. | 0·27 | 3 | 1·05 | 3 | 0·34 | 2 | 0·22 | 2 | .. | .. | .. | .. |
| Ante-Monsoon .. .. .. .. | 2·21 | 12 | 1·37 | 9 | 4·14 | 9 | 3·17 | 10 | 2·98 | 9 | 4·20 | 14 | 0·14 | 3 | 5·78 | 8 | 5·36 | 9 |
| Monsoon-Kharíf .. .. .. .. | 5·15 | 33 | 6·58 | 23 | 13·57 | 25 | 8·08 | 27 | 9·09 | 19 | 9 52 | 30 | 6·61 | 19 | 6·96 | 10 | 6·19 | 25 |
| Monsoon-Rabi .. .. .. .. | 9·58 | 40 | 6·12 | 19 | 6·92 | 23 | 11·84 | 29 | 9·73 | 22 | 10·60 | 24 | 12·07 | 19 | 19·74 | 17 | 14·13 | 30 |
| Late Rains .. .. .. .. | 4·15 | 11 | 3·14 | 7 | 8·13 | 6 | 3·34 | 6 | 2·28 | 7 | 1·20 | 7 | 1·07 | 5 | 2·04 | 5 | 4·65 | 8 |
| Total .. | 21·92 | 102 | 18·23 | 65 | 32·76 | 63 | 26·70 | 75 | 25·13 | 60 | 25·86 | 77 | 20·11 | 48 | 34·52 | 40 | 30·33 | 72 |
| Average .. | 26·79 | 99 | 25·73 | 83 | 25·71 | 80 | 25·02 | 91 | 23·46 | 63 | 24·07 | 98 | 22·93 | 68 | 25·51 | 49 | 25·82 | 75 |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukas of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Rain generally above or up to average except at Bijápur and Indi. Ante-monsoon showers in Ashvini and Krittika were useful in preparing land. Monsoon commenced with Mrig, but the fall was light till the middle of June when good rain fell throughout the district and kharif sowings began everywhere. But sowings soon retarded and young crops, where sown, began to wither under the deficient fall of July and August. Relief came early in September in Purva and all anxiety removed by the heavy falls of Uttara and Hasta. Kharif crops much benefited and rabi sowings vigorously carried on. The break in October was, however, injuriously long. Vishákha rain in early November, though excessively heavy in places, was generally favourable to rabi, but injurious to kharíf jowári which was turned black. On the whole season less favourable than previous two years. Kharíf outturn estimated at 7 annas and rabi at 8 annas.

## Dhárwár, 1888.

| Rain Periods. | Dha'rwa'r. | | Mugud. | | Hubli. | | Kalghatgi. | | Banka'pur. | | Ha'ngal. | | Kod. | | Ra'nebennur. | | Karajgi. | | Gadag. | | Mundargi. | | Naval-gund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 1·25 | 2 | 2·25 | 3 | 1·53 | 1 | 1·50 | 1 | 2·35 | 1 | 0·40 | 2 | .. | .. | 0·05 | 1 | 1·00 | 2 | 1·42 | 2 | 1·45 | 2 | 1·00 | 3 | 1·80 | 2 | 1·75 | 5 |
| Ante-Monsoon .. | 5·64 | 15 | 4·30 | 14 | 6·10 | 10 | 3·58 | 10 | 6·10 | 10 | 6·64 | 11 | 3·29 | 8 | 6·58 | 10 | 6·68 | 10 | 9·64 | 14 | 5·98 | 7 | 7·08 | 9 | 5·80 | 7 | 7·71 | 11 |
| Monsoon-Kharíf .. | 11·82 | 60 | 17·49 | 61 | 9·73 | 39 | 23·93 | 64 | 11·60 | 40 | 28·10 | 54 | 18·22 | 44 | 8·60 | 29 | 6·57 | 31 | 4·49 | 26 | 4·12 | 14 | 4·49 | 14 | 4·69 | 14 | 6·77 | 20 |
| Monsoon-Rabi .. | 12·35 | 29 | 12·61 | 28 | 11·30 | 26 | 15·05 | 25 | 5·19 | 19 | 6·95 | 23 | 6·96 | 22 | 6·45 | 19 | 7·35 | 21 | 9·58 | 20 | 9·93 | 14 | 15·54 | 19 | 16·45 | 14 | 10·11 | 24 |
| Late Rains .. .. | 2·28 | 9 | 2·40 | 8 | 3·72 | 7 | 2·78 | 8 | 2·77 | 7 | 2·74 | 6 | 2·42 | 7 | 2·85 | 8 | 2·61 | 6 | 2·68 | 8 | 2·67 | 6 | 4·60 | 9 | 4·17 | 11 | 6·38 | 7 |
| Total .. | 33·34 | 115 | 39 05 | 114 | 32·38 | 83 | 46·84 | 108 | 28 01 | 77 | 44·83 | 96 | 30·89 | 81 | 24·53 | 67 | 24·21 | 70 | 27·81 | 70 | 24·15 | 43 | 32·71 | 54 | 32·91 | 48 | 32·72 | 69 |
| Average .. | 32·95 | 100 | 34·34 | 93 | 27·03 | 90 | 30·14 | 79 | 28·29 | 70 | 37·34 | 70 | 27·70 | 63 | 23·82 | 54 | 27·21 | 66 | 25·98 | 56 | 17·51 | 41 | 25·36 | 61 | 23·56 | 55 | 25·77 | 72 |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur Tálukas are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: 'Good rain won't give a big crop, nor will bad rain bring famine.' This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Rainfall above or up to average everywhere except Karajgi. Ante-monsoon showers in Rohini were abundant and useful for rice sowing in the malád. Regular monsoon commenced late and in light showers. Rain at end of Mrig (17th June) was sufficient to begin general sowings all over and to complete rice sowing in malád. A'rdra rain at end of June was generally deficient, but the fall of Punarvasu in beginning of July was everywhere good though not quite sufficient in north and east. In south-west the July and August rain was continuous and favourable for rice, but scanty and irregular in north-east where kharíf sowings not full and crops withering where sown. The Magha rain at end of August was locally useful, but general relief came with Uttara in early September. Hast rain was also abundant, improving kharíf crops and promoting cotton and other rabi sowing. Rain in Chitra and Sváti was light; but Vishákha rain in November was generally beneficial, though the heavy fall injured jowári and wheat and retarded reaping of kharíf in Ron. Season on the whole favourable. Of the kharíf, rice outturn estimated at 12 annas and jowári and other minor crops at 6 annas. Rabi estimated at 8 annas. Exotic cotton suffered from blight and outturn reduced to 5 annas, but the indigenous cotton was better and yielded a 9 anna crop.

## Kánara, 1888.

| Rain Periods. | Ka'rwa'r. | | Ankola. | | Kumta. | | Hona'var. | | Bhatkal. | | Haliya'l. | | Supa. | | Yella'pur. | | Mundgod. | | Sirsi. | | Sidda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 0·76 | 4 | .. | .. | 0·74 | 2 | 0·55 | 1 | 0·12 | 1 | 3·33 | 3 | 1·34 | 4 | 2·35 | 5 | 1·53 | 3 | 0·94 | 2 | 0·65 | 1 |
| Ante-Monsoon .. | 4·02 | 14 | 3·73 | 4 | 3·81 | 13 | 4·86 | 13 | 9·27 | 16 | 4·37 | 16 | 1·60 | 12 | 4·72 | 15 | 7·15 | 15 | 4·28 | 15 | 3·99 | 13 |
| Monsoon-Kharif .. | 115·07 | 71 | 119·02 | 67 | 121·99 | 69 | 135·24 | 71 | 123·83 | 70 | 32·83 | 64 | 81·70 | 69 | 86·74 | 71 | 26·30 | 64 | 90·73 | 69 | 101·95 | 71 |
| Monsoon-Rabi .. | 10·93 | 23 | 11·88 | 22 | 18·36 | 25 | 25·27 | 24 | 18·07 | 30 | 11·27 | 33 | 21·66 | 32 | 21·56 | 34 | 11·14 | 29 | 17·34 | 33 | 19·89 | 29 |
| Late Rains ... .. | 3·15 | 9 | 3·19 | 5 | 2·30 | 9 | 3·47 | 10 | 4·19 | 13 | 2·59 | 10 | 2·60 | 12 | 2·19 | 10 | 3·63 | 8 | 1·73 | 11 | 1·82 | 11 |
| Total .. | 133·93 | 121 | 137·82 | 98 | 147·20 | 118 | 169·39 | 119 | 155·48 | 130 | 54·39 | 126 | 108·90 | 129 | 117·56 | 135 | 49·75 | 119 | 115·02 | 130 | 128·30 | 125 |
| Average .. | 116·62 | 130 | 121·46 | 103 | 133·11 | 134 | 128·38 | 130 | 140·91 | 121 | 44·37 | 115 | 89·18 | 135 | 91·56 | 129 | 41·25 | 115 | 91·94 | 138 | 98·93 | 132 |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The lowland or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—Rainfall much above average throughout the district. Ante-monsoon showers of Rohini were favourable for early rice cultivation. South-west monsoon broke on 2nd June on coast. The rain came very heavily for two months and a half in June, July and first half of August. This rain, though excessive for crops in lowlands on coast, was on the whole seasonable and sufficient for ploughing and transplantation. The break in Purva in early September was favourable for weeding and healthy growth of plants, but it was injuriously prolonged. Rice crop suffered more on coast than in upland tálukas. Some relief came by the light showers of Uttara and Hast which were specially favourable in upland tálukas. The late rains of Sváti and Vishákha were favourable for garden crops and sowing second crops. On the whole season favourable, being fair below and good above ghát. Outturn of rice estimated at 10—12 annas. Garden cultivation was successful and the outturn of sugarcane and betelnut was unusually good.

## Ratnágiri, 1888.

| Rain Periods. | Ratna'giri. | | Vengurla. | | Ma'lvan. | | Devgad. | | Ra'ja'pur. | | Sanga-meshvar. | | Chiplu'n. | | Guha'gar. | | Khed. | | Da'poli. | | Mandan-gad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 1·81 | 3 | 2·65 | 4 | 1·76 | 5 | 1·80 | 2 | 2·27 | 3 | 3·40 | 3 | 1·64 | 3 | 1·98 | 3 | 2·00 | 2 | 1·73 | 4 | 1·64 | 4 |
| Ante-monsoon .. | 0·99 | 4 | 4·16 | 10 | 0·37 | 4 | 1·40 | 3 | 0·43 | 2 | 0·88 | 5 | .. | .. | 0·52 | 3 | 0·59 | 3 | 0·05 | 2 | 0·20 | 1 |
| Monsoon-Kharif .. | 65·67 | 67 | 104·33 | 70 | 80·72 | 67 | 87·80 | 69 | 122·55 | 67 | 119·18 | 71 | 119·05 | 69 | 76·07 | 67 | 115·73 | 71 | 132·31 | 70 | 112·62 | 70 |
| Monsoon Rabi .. | 16·16 | 22 | 14·23 | 23 | 9·59 | 22 | 5·62 | 20 | 14·62 | 30 | 25·31 | 38 | 17·21 | 33 | 11·08 | 18 | 17·23 | 30 | 15·94 | 29 | 21·34 | 32 |
| Late Rains .. .. | 0·74 | 7 | 1·93 | 6 | 1·81 | 4 | 1·56 | 2 | 1·40 | 6 | 5·17 | 11 | 5·52 | 9 | 1·70 | 3 | 5·15 | 4 | 4·52 | 5 | 5·28 | 6 |
| Total .. | 85·37 | 103 | 127·30 | 113 | 94·25 | 102 | 98·18 | 96 | 141·27 | 103 | 153·94 | 128 | 143·42 | 114 | 91·35 | 94 | 140·70 | 110 | 154·55 | 110 | 141·08 | 113 |
| Average .. | 100·73 | 131 | 141·48 | 134 | 89·57 | 92 | 87·50 | 100 | 127·91 | 122 | 145·57 | 135 | 146·04 | 119 | 100·84 | 103 | 130·52 | 106 | 132·64 | 121 | 150·79 | 120 |

*General characteristics.*—The district is formed by a narrow belt of lowland; though hilly and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Year's rainfall generally up to average. Ante-monsoon rain in Krittika was favourable for sowing early rice. Regular monsoon broke with Mrig about 5th June and heavy rain fell continuously till the end of Magha (27th August). This fall was throughout seasonable and sufficient for ploughing and transplantation of rice and nágli. The break in Purva was at first good for weeding, but continued injuriously long for ripening crops. The Uttara rain in 2nd half of September gave great relief and early crops escaped uninjured; but subsequent break in Hast and Chitra in October was very trying to the late or *mahán* crops, which suffered much from deficient rain at the time of seeding. The late rains of Sváti and Vishákha in early November were favourable to summer crops, but too late for kharíf crops which were ready for harvest. Season fair on the whole. Outturn of early crops was estimated at from 10 to 12 annas and that of late crops from 7 to 11 annas. Harik yielded a 6 anna crop.

## Kolába, 1888.

| Rain Periods. | Alibá'g. | | Panvel. | | Uran. | | Pen. | | Roha. | | Ma'ngaon. | | Maha'd. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | | Inches. | |
| Early Rains ... ... ... | 1·66 | 5 | 1·98 | 6 | 0·93 | 4 | 1·12 | 4 | 1·45 | 3 | 1·55 | 4 | 0·94 | 4 |
| Ante-Monsoon... ... ... | 0·44 | 2 | 0·50 | 3 | 0·12 | 1 | 0·09 | 1 | ... | ... | 0·23 | 3 | 1·65 | 4 |
| Monsoon-Kharíf ... ... | 60·97 | 65 | 76·34 | 69 | 75·72 | 55 | 90·51 | 66 | 99·89 | 59 | 97·81 | 70 | 95·48 | 70 |
| Monsoon-Rabi ... ... ... | 10·25 | 22 | 12·00 | 30 | 6·07 | 18 | 11·78 | 29 | 12·81 | 20 | 14·73 | 40 | 16·16 | 29 |
| Late Rains ... ... ... | 2·23 | 5 | 4·72 | 6 | ... | ... | 2·20 | 7 | 3·02 | 5 | 4·06 | 9 | 10·38 | 8 |
| Total ... | 75·55 | 99 | 95·54 | 114 | 82·84 | 78 | 105·70 | 107 | 117·17 | 87 | 118·38 | 126 | 124·61 | 115 |
| Average ... | 84·79 | 119 | 110·50 | 126 | 95·48 | 115 | 114·04 | 125 | 122·27 | 108 | 127·59 | 113 | 130·58 | 122 |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heavier in parts towards the Sahýádris.

*Remarks.*—Year's rainfall below average everywhere. Ante-monsoon showers very light. Monsoon broke with Mrig about 5th June, generally in light showers, and kharíf sowings completed seasonably. Copious rain came with Árdra at end of June which continued throughout July and was sufficient and seasonable for transplantation. Rainfall of Áshlesha and Magha in August was moderate and generally favourable for crops. But the break in September-October, only partially relieved by light showers of Uttara in middle of September, was injuriously long and all standing crops suffered more or less. The late falls of Sváti and Vishákha in November were not only too late for kharíf crops, but damaged the reaped crops and injured standing crops by causing the grain to sprout in the ear, in places. These late rains, however, favoured the sowing of pulses (vál, mug, &c.) as second crops. On the whole season not favourable. The outturn of kharíf and varkas crops estimated at 8—12 annas. Salt rice suffered most from drought and its outturn reduced to 2—4 annas. Harik yield was estimated at 4—10 ans. Rabi crops suffered from want of moisture, and the outturn varied from 8 to 12 annas.

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## Thána, 1888.

| Rain Periods. | Tha'na. | | Kalya'n. | | Karjat. | | Ma'thera'n. | | Kha'la'pur. | | Murba'd. | | Sha'ha'pur. | | Mokha'da. | | Bhiwndi. | | Bassein. | | Va'da. | | Ma'him. | | Da'ha'nu. | | Umbargaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 4·95 | 3 | 6·09 | 4 | 1·77 | 3 | 1·45 | 3 | 1·22 | 5 | 3·15 | 3 | 2·29 | 3 | 0·36 | 1 | 4·73 | 2 | 2·73 | 5 | 1·00 | 2 | 0·88 | 4 | 0·67 | 1 | 0·19 | 1 |
| Ante-Monsoon ... | 0·81 | 1 | 0·29 | 2 | 1·21 | 2 | 1·13 | 1 | 0·50 | 1 | ... | ... | 0·79 | 1 | 1·45 | 3 | 0·12 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharíf ... | 66·71 | 65 | 62·36 | 62 | 90·31 | 65 | 151·73 | 69 | 84·79 | 64 | 52·82 | 56 | 65·91 | 64 | 55·68 | 62 | 64·28 | 63 | 40·46 | 62 | 64·94 | 63 | 34·70 | 61 | 65·09 | 60 | 45·79 | 42 |
| Monsoon-Rabi ... | 12·65 | 29 | 14·13 | 25 | 23·15 | 31 | 56·72 | 45 | 15·09 | 28 | 24·80 | 22 | 22·12 | 25 | 30·79 | 33 | 14·6 | 29 | 8·32 | 23 | 17·71 | 26 | 9·57 | 22 | 12·34 | 17 | 9·64 | 18 |
| Late Rains ... ... | 2·94 | 7 | 3·28 | 8 | 4·60 | 5 | 7·09 | 6 | 3·25 | 4 | 1·15 | 4 | 2·35 | 5 | 0·94 | 2 | 3·94 | 7 | 1·13 | 2 | 0·46 | 2 | 0·75 | 2 | 2·00 | 4 | ... | ... |
| Total ... | 87·16 | 105 | 86·15 | 101 | 121·04 | 106 | 218·12 | 124 | 104·85 | 102 | 81·92 | 85 | 93·46 | 98 | 89·22 | 101 | 87·13 | 102 | 52·64 | 92 | 84·11 | 93 | 45·90 | 89 | 80·10 | 82 | 55·62 | 63 |
| Average... | 99·12 | 108 | 100·73 | 116 | 126·91 | 115 | 209·71 | 122 | 122·09 | 106 | 96·15 | 101 | 111·34 | 114 | 100·92 | 106 | 101·79 | 106 | 73·85 | 97 | 95·96 | 89 | 62·67 | 101 | 71·39 | 95 | 64·83 | 83 |

*General characteristics.*—Inland, the district is well watered and well wooded. Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Year's rainfall generally below average. Regular monsoon broke with Mrig about 5th June and kharíf sowings commenced, but rain was in beginning insufficient for full sowings in most parts. Copious rain came with Árdra at end of June sufficient for general sowings and for beginning transplantation in places. July rain was generally seasonable and sufficient for transplantation, except at Bassein and Máhim, whereby deficient rain transplantation was retarded and salt rice considerably injured. Transplantation generally completed by middle of August and young plants grew well by the beneficial fall of Magha at end of August. But the break (beginning with Purva) in September-October, which was only partially relieved by the light fall of Uttara and Hast, was injuriously long for ripening crops which suffered all over. The late rains in Sváti and Vishákha in November were too late for kharíf and damaged mown grass and reaped crops lying in fields. On the whole, season not favourable, being worse in inland than in coast tálukás. The outturn estimated at 10 to 12 annas on coast, and at 8—10 annas in inland tálukas.

## Surat, 1888.

| Rain Periods. | Surat. | | Olpa'd. | | Ra'nder. | | Ma'ndvi. | | Ba'rdoli. | | Va'lod. | | Jala'lpor. | | Chikhli. | | Balsa'r. | | Pa'rdi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | 1·11 | 2 | 0·09 | 2 | ... | ... | ... | ... | 0·15 | 1 | 0·05 | 1 |
| Ante-Monsoon ... ... | ... | ... | ... | ... | 0·10 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·65 | 1 |
| Monsoon-Kharif ... ... | 24·73 | 46 | 17·93 | 43 | 25·60 | 36 | 21·45 | 46 | 23·34 | 49 | 23·64 | 47 | 35·29 | 53 | 34·15 | 50 | 36·61 | 45 | 47·37 | 52 |
| Monsoon-Rabi ... ... | 4·56 | 13 | 2·89 | 11 | 3·72 | 12 | 7·74 | 14 | 6·82 | 15 | 9·95 | 16 | 4·66 | 13 | 8·09 | 15 | 8·94 | 15 | 9·20 | 17 |
| Late Rains ... ... | 0·20 | 2 | 0·34 | 2 | 0·30 | 3 | 0·11 | 1 | 0·19 | 2 | 0·28 | 3 | 0·35 | 3 | 1·63 | 3 | 0·50 | 3 | 0·60 | 1 |
| Total ... | 29·49 | 61 | 21·16 | 56 | 29·72 | 52 | 29·30 | 61 | 31·46 | 68 | 33·96 | 68 | 40·30 | 69 | 43·87 | 68 | 46·20 | 64 | 57·87 | 72 |
| Average ... | 44·06 | 74 | 35·52 | 52 | 42·95 | 71 | 65·27 | 84 | 53·82 | 98 | 61·31 | 75 | 58·96 | 77 | 77·63 | 91 | 74·43 | 95 | 71·49 | 101 |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east Dángs with heavy rainfall but light soil. As a rule rain lighter on the coast than inland.

*Remarks.*—Year's rainfall much below average. Monsoon broke generally with Mrig about 6th June, but the fall was very light, being only useful for preparing land and for partial sowings. Heavy sowing rain came at end of A'rdra in beginning of July. Fair showers at end of Punarvasu (15th—16th July) were favourable for completing kharíf sowing and sufficient to begin rice transplantation in places. Transplantation was, however, soon retarded owing to scanty rainfall of Pushya at end of July. The Áshlesha and Magha rain in August was light but continuous and very beneficial to standing crops though not quite sufficient for rice transplantation, especially in north. In parts of Bárdoli rice fields were consequently replaced by jowári. The closing rain in September-October was almost absent and injuriously affected all crops, particularly rice. The cyclonic showers of Vishákha in early November, though light, came most opportunely, allowing rabi sowings and giving some relief to jowári and other kharíf crops, except rice which was already reaped. Season on the whole unfavourable; outturn of jowári and bájri was fair, but that of rice and other crops very low from 3 to 5 annas and wheat estimated at 4 annas.

## Broach, 1888.

| Rain Periods. | Broach. | | Anklesvar. | | Hánsot. | | Vágra. | | Ámod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·10 | 1 | 0·23 | 2 | 0·12 | 2 | 0·65 | 2 | 0·22 | 2 | 0·62 | 2 |
| Ante-Monsoon ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharíf ... ... | 12·40 | 33 | 10·25 | 26 | 13·63 | 16 | 9·64 | 24 | 9·90 | 18 | 6·60 | 25 |
| Monsoon-Rabi .. ... | 5·97 | 11 | 4·03 | 9 | 5·55 | 8 | 5·69 | 12 | 9·23 | 11 | 6·06 | 10 |
| Late Rains ... ... ... | 0·49 | 2 | 0·62 | 1 | 0·47 | 2 | 0·42 | 1 | 0·53 | 1 | 0·75 | 1 |
| Total ... | 18·96 | 47 | 15·13 | 38 | 19·77 | 28 | 16·40 | 39 | 19·88 | 32 | 14·03 | 38 |
| Average ... | 44·21 | 68 | 41·41 | 56 | 34·24 | 51 | 30·61 | 68 | 41·75 | 43 | 39·46 | 60 |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being as a rule more plentiful in the Broach Táluka. The rainfall is supplemented by heavy dews from October to December.

*Remarks.*—Year's rainfall much below average and very capricious. Monsoon broke with Mrig about 6th June in south, but late in north and the fall was very light. General sowing rain came at end of Árdra (20th June to 3rd July). The good fall of Punarvasu, about the middle of July, favoured further sowing of cotton and other kharíf crops except in Jambusar in north. The break at end of July continued long, causing anxiety and retarding sowing in north. Sowings, however, were completed by the heavy fall of Áshlesha in beginning of August. Magha rain at end of August was everywhere beneficial and prospects generally improved. The rainfall in September-October both in Uttara and Hast was almost absent at a time when ripening crop was most in need of rain. All crops suffered, particularly rice. Cotton alone was kept in a fairly good condition owing to the retentive nature of the soil coupled by dewy nights. The cyclonic showers of Vishákha in November were, however, most opportune, giving relief to standing kharíf and allowing rabi sowings. No rain fell in December, but heavy dews at night kept cotton and rabi crops in a fair condition. Season fair on the whole. Outturn of cotton estimated at 10—12 annas; jowári gave a good yield estimated at 10 to 13 annas, but the wheat was a poor crop.

## Kaira, 1888.

| Rain Periods. | Kaira. | | Mehmadabad. | | Ma'tar. | | Nadia'd. | | Kapadvanj. | | Tha'sra. | | A'nand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early rains .. .. .. | 0·71 | 5 | 0·71 | 4 | 1·09 | 3 | 0·75 | 4 | 0·89 | 5 | 0·25 | 4 | 1·21 | 3 | 1·60 | 4 |
| Ante-Monsoon .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·20 | 1 | .. | .. | .. | .. | .. | .. |
| Monsoon-Kharíf .. .. .. | 9·33 | 28 | 7·95 | 19 | 7·94 | 16 | 6·80 | 34 | 7·99 | 30 | 5·75 | 24 | 10·36 | 26 | 8·24 | 29 |
| Monsoon-Rabi .. .. .. | 7·57 | 9 | 7·35 | 8 | 6·69 | 9 | 10·54 | 12 | 9·10 | 12 | 9·94 | 12 | 9·98 | 10 | 9·21 | 11 |
| Late Rains .. .. .. | 2·45 | 2 | 2·55 | 2 | 2·56 | 2 | 2·16 | 2 | 1·45 | 2 | 1·23 | 2 | 0·80 | 1 | 1·00 | 1 |
| Total .. | 20·06 | 44 | 18·56 | 33 | 18·28 | 30 | 20·25 | 52 | 19·63 | 50 | 17·17 | 42 | 22·35 | 40 | 20·05 | 45 |
| Average .. | 37·13 | 75 | 34·24 | 66 | 37·93 | 53 | 37·27 | 72 | 34·57 | 65 | 36·66 | 61 | 38·44 | 60 | 37·89 | 62 |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land ; the centre, a tract of most fertile soil yielding the choicest crops ; and westward a bare though well cultivated tract of rice land.

*Remarks.*—Year's rainfall everywhere much below average. Monsoon broke with light preparatory showers on 8th June in Mrig. Moderate rain came in A'rdra at end of June, generally sufficient to begin kharíf sowings of rice, kodra, bájri, &c. Rain in middle of July was opportune and very beneficial to seedlings as also for completing bájri and bávto sowing. But the break in Pushya and Áshlesha was injuriously long, damaging young crops, delaying rice transplantation and causing great anxiety. Needed relief came with Magha from 19th August. This rain was very heavy and sufficient for rice transplantation, though late in places ; all crops revived and prospects much improved. But the total failure of rain in September and October seriously affected all crops especially rice, at the time of ripening. Rice and tobacco helped by well-irrigation where available. The cyclonic rain of Vishákha in early November was fairly heavy, and gave great relief to standing crops and allowed rabi sowings. On the whole season not favourable. Kharíf outturn low ; rice almost a failure except where it was under well-irrigation ; bájri estimated at 12 annas and jowári, bávto and kodra at 6—10 annas in Nadiád, A'nand and Borsad ; elsewhere bájri 6—10 annas and other crops 2—6 annas. Rabi fared well and outturn much better ; wheat and barley estimated at 12—14 annas, while tobacco commanded an unusually high price.

## Panch Maháls, 1888.

| Rain Periods. | Godhra. | | Kálol. | | Ha'lol. | | Dohad. | | Jha'lod. | | Ja'mbughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·41 | 2 | 0·65 | 2 | 0·46 | 3 | 0·18 | 5 | 0·33 | 2 | 0·15 | 1 |
| Ante-Monsoon . | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... |
| Monsoon-Kharíf. | 9·14 | 33 | 8·17 | 34 | 10·32 | 34 | 5·34 | 23 | 6·94 | 13 | 8·90 | 45 |
| Monsoon-Rabi... | 14·77 | 17 | 12·16 | 13 | 14·24 | 13 | 8·14 | 14 | 10·81 | 10 | 15·66 | 16 |
| Late Rains ... | 0·76 | 2 | 0·91 | 1 | 0·77 | 1 | 0·61 | 1 | 0·82 | 1 | 0·39 | 2 |
| Total ... | 25·08 | 54 | 21·89 | 50 | 25·79 | 51 | 14·27 | 43 | 18·90 | 26 | 25·10 | 64 |
| Average ... | 43·24 | 77 | 40·20 | 69 | 47·97 | 69 | 32·56 | 73 | 32·65 | 60 | 50·69 | 79 |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Year's rainfall little more than half the average. Monsoon broke very late and in light showers. Rain in A'rdra after 24th June was sufficient to begin sowings of maize, rice, kodra, &c., in Godhra and Kálol. Moderate but general rain came in middle of July, favourable to young crops and further sowing of bájri, &c. At end of July rain again scanty, sowings incomplete, transplantation delayed and seedlings withering. Light showers of A'shlesha in early August were beneficial in western tálukas ; but full and general relief came with the heavy fall of Magha about 19th August. This rain was most opportune for rice and bávto transplantation, very beneficial to withering crops and sufficient for replenishing water-supply. A few light showers in middle of September were favourable for kharíf in general but deficient for rice. The total failure of closing showers of Hast in October caused considerable injury to almost all crops, except perhaps to the early maize which was already ripe for harvest. The light showers of Vishákha on 8th to 10th November were beneficial to pulses and oil-seeds, but insufficient for full rabi sowings. On the whole season unfavourable. Outturn of early maize and bájri fair 8—14 annas, but rice gave exceedingly poor outturn. The outturn of pulses and oil-seeds was fair to good, the November rain greatly increasing the yield. The rabi—wheat and gram—was sown over a very limited area.

## Ahmadabad, 1888.

| Rain Periods. | Ahmadabad. | | Para'ntij. | | Moda'sa. | | Sa'nand. | | Viramga'm. | | Dholka. | | Dhandhuka. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | Rs. | | In. | | In. | |
| Early Rains ... ... | 1·18 | 3 | 1·39 | 4 | 1·13 | 5 | 2·54 | 4 | 1·36 | 6 | 1·65 | 4 | 1·43 | 2 | 0·13 | 3 |
| Ante-Monsoon ... | 0·08 | 1 | ... | ... | 0·04 | 1 | 0·22 | 1 | ... | ... | 0·14 | 2 | 0·38 | 1 | 0·02 | 1 |
| Monsoon-Kharif ... | 6·82 | 14 | 5·81 | 21 | 9·13 | 29 | 10·12 | 24 | 8·19 | 27 | 10·26 | 26 | 11·34 | 24 | 7·68 | 23 |
| Monsoon-Rabi ... | 4·25 | 8 | 7·19 | 11 | 11·91 | 14 | 4·18 | 9 | 2·95 | 15 | 5·88 | 10 | 6·92 | 9 | 2·78 | 9 |
| Late Rains ... ... | 2·43 | 3 | 2·17 | 2 | 1·32 | 1 | 3·04 | 2 | 4·12 | 1 | 4·56 | 2 | 1·23 | 2 | 0·04 | 1 |
| Total ... | 14·76 | 29 | 16·56 | 38 | 23·53 | 50 | 20·10 | 40 | 16·62 | 49 | 22·49 | 44 | 21·30 | 38 | 10·65 | 42 |
| Average ... | 29·92 | 50 | 30·08 | 56 | 37·32 | 65 | 31·09 | 55 | 28·22 | 64 | 36·39 | 69 | 27·92 | 62 | 27·35 | 58 |

*General characteristics.*—Except in the hilly parts of Modása where the supply is sometimes considerable, the rainfall throughout the district is generally very light.

*Remarks.*—Year's rainfall much below average. Monsoon commenced late with very light showers. Heavy rain came in A'rdra, after considerable anxiety, from 24th June, sufficient to begin sowings of rice, bájri, jowári, pulses, &c. After a week's break fair rain came again in middle of July, favourable to seedlings and for further sowing of bájri, cotton, maize, &c. An injuriously long break followed retarding rice transplantation and withering seedlings. Relief came all over, with the heavy fall of Magha about 19th August. This rain was sufficient for rice transplantation, and young crops of cotton, jowári, bájri and maize revived. But the absence of Uttara and Hast rains in September and October seriously damaged all standing crops, especially rice, and there was no hope for rabi sowing. The cyclonic rain of Vishákha about 8th to 10th November was heavy and general (except in extreme south) and did immense good to standing cotton and other kharíf crops, and allowed full sowings of wheat and gram. Season on the whole unfavourable. Kharíf outturn of bájri and jowári was fair in north (8—10 annas), but poor in south (2—6 annas), rice almost a failure except in canal villages of Parántíj where it was 8 annas. Rabi promised very well in beginning, but later on, rust and want of cold and moisture reduced the outturn to 8—12 annas in north and 4—8 annas in south.

## APPENDIX A.

### *Goat disease investigated by Mr. Steel at Bhadgaon (para. 45).*

A disease new to India, in as far as the scientific recognition goes, and known as *Epizootic Pneumonia* or *Pleuro-Pneumonia* of goats, prevailed among the goats on and about the Bhadgaon Farm and was recognised as pneumonia by the Superintendent of the Farm, Mr. Mehta, M.R.A.C. It is supposed that the disease was brought by some of the goats purchased at markets in different parts in Khándesh. The animals were subjected to a treatment consisting of administration of ammonia and ether internally and application of stimulants to the chest externally, but it was ineffectual. The disease commenced about the 17th April on the farm and disappeared about 23rd May, and 14 animals succumbed to it. This disease (which is locally known distinctively as "rog" or the disease, and with which the local butchers and shepherds are familiar) was ascertained as causing considerable ravages among the sheep and goat flocks of the Dongrás who traverse with sometimes several thousand sheep forming flocks which are hired by agriculturists to manure their fields. Though there were no cases among the sheep at Bhadgaon, it is evident that this disease is prevalent and widespread among the adult goats and sheep of both sexes, and sometimes calves are said to be affected by it, but not kids. It is quite independent of season, and its spread is due to contagion only. Mr. Steel says:—"That the disease is pleuro-pneumonia is sufficiently evident from the *post-mortem* examination, and that it is specific is evident from one side of the chest only being affected, from the disordered condition of the blood and from the *post-mortem* lesions in general. Whether it is the same disease as specific pleuro-pneumonia of cattle, or whether it is merely a close ally of that disorder, remains to be seen. I think the latter view more probably correct, as we have no evidence of adult cattle on the farm taking the disease, which would be the case probably were it communicable to them. The symptoms and *post-mortem* appearances are very similar to those of 'pleuro' in cattle. * * * * * It is said that four or five thousand sheep and goats belonging to one owner have in one season been carried off by the disease, and in this way several wealthy men have been ruined. Thus it is evident that a disease among goats is prevalent, widespread, and requires serious consideration as being a source of much loss to the community. * * * I did not see any cases among sheep, but there seems ample evidence that it affects them as well as goats."

A.—When the disease is in its acute phase:—

*Symptoms:—*

(1) Acute fever with a temperature of 106°·2 or so; (2) cough and slight nasal discharge; (3) pale mouth; (4) pink or bronze conjunctiva; (5) dry nose and anus; (6) bright eyes and glossy coat; (7) modified lung sounds; and (8) quick pulse and breathing.

*Post-mortem Appearances:—*

Autopsy, immediately after death, showed the carcass in excellent condition.

(1) Spleen nodular; (2) liver congested somewhat; (3) one lung affected and weighed heavier than the unaffected one; (4) the liver showed small local patches of hepatitis; (5) the blood normal; (6) no fluid in the chest, but slight local pleuritis, also a little subendocardial extravasation; (7) the trachea was markedly congested and the bronchi also, their passages being filled with froth and phlegm; (8) the left lung was consolidated, especially in its posterior division, its surface being of a greenish colour and presenting a number of blood spots varying in size and colour.

B.—When the disease assumes the sub-acute phase:—

*Symptoms:—*

(1) General sluggishness; (2) paroxysmal cough; (3) discharge from nostrils; (4) extreme emaciation; (5) coat glossy and the eyes bright and glistening; (6) mouth pale; (7) pulse 80°, evening temperature 104°·2, morning temperature 103°·8; (8) conjunctiva somewhat bronze-coloured; (9) anus dry and hot; (10) lung sounds lost on one side, and pressure on the intercostal spaces seemed to pain the animal.

*Post-mortem Appearances:—*

Autopsy, immediately after death, showed abdominal organs healthy, with the exception of the spleen, which was rather firm in consistency. Liver somewhat pale. Pleural cavity of the diseased side of the chest was obliterated by adhesions, except at the extreme infero-posterior part, where was accumulated an amount of clear serous fluid which distended the remainder of the cavity and coagulated (like size) into a greenish opalescent mass after removal from the body. The endocardium of the left side was congested, one lung healthy, the other consolidated, except at the extreme anterior part, of a greenish metallic colour on the surface, quite useless for all practical purposes, exhibiting from before backwards the following characteristic appearances:—

(*a*) Congestion; (*b*) thickening of the pleura and of the parenchyma, also nodules, probably due to accumulation of pus in the air cells; (*c*) this condition exaggerated

(*d*) grey hepatization or nodules in a state of suppuration; (*e*) the parenchyma undergoing cartilage-like thickening, is encroaching on the hepatized portion; until (*f*) the whole tissue becomes a cartilage-like mass.

*Treatment* :—No curative measures were successful. Mr. Steel proposes the following preventive or repressive measures :—

(1) Elevation of the internal temperature as detectable by the thermometer is apparently absolutely the earliest symptom, but for practical purposes it is sufficient if the shepherd be given orders to at once isolate and report any animal which coughs, discharges from the nose, has discoloured eye membranes, seems unable to keep up with the rest of the flock, or goes off its feed.

(2) The best treatment practicable at the Bhadgaon Farm :—

(*a*) Close supervision with a view to early detection of cases; (*b*) prompt isolation of sick and suspects; (*c*) segregation, for at least 14 days, of all freshly purchased animals; (*d*) thorough disinfection of any sheds occupied by the herd, or penning them at nights in the open air, with frequent change of site of the pen; (*e*) continuation of the system of prompt slaughter and sale of animals directly they are found to be diseased; for such evidence as is to hand tends to the view that no ill consequences to mankind are liable to result from the ingestion of the flesh of animals suffering from this disorder.

Mr. Steel made the following remarks on the present summary when it was sent to him in accordance with Government orders :—

"It is probable that diminished prevalence of communicable animal diseases during the year under consideration has been brought about only to a very limited degree by Government measures taken hitherto, though diffusion of information by means of the 'Cattle Disease Primer' widely distributed and the 'Instructions concerning Communicable Diseases of Horned Cattle' has, doubtless, had some effect. Apparently the curve of disease prevalence is now at a low point only in the course of one of those natural cycles in which experience has shown that disease occurs. Thus we may anticipate that the present lull will be followed by heavy losses in the course of a year or two, and Government and private efforts to provide safeguards against cattle-disease ought not to be relaxed. Other parts of India, such as Burma, Bengal, and the Panjáb, have suffered severely this year.

"Prevalence of cattle-disease in Native States is a serious matter, tending to undo the results of efforts made in British territory in consequence of the States acting as foci from which disease may radiate over the frontier. A leading feature in the policy of disease repression in India, therefore, is to endeavour to secure as effectual veterinary inspection in the Native States as in British territory."

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## APPENDIX B.

*Information as regards the cattle-diseases prevalent during the year under report (para. 45.)*

Reports from the several districts of the Presidency Proper show that about 16,041 of the agricultural stock in 361 villages were affected by cattle-disease during the year under report, of which 9,542 were reported to have died. Following is the concise summary of the details received. Mr. Steel's remarks thereon are given in foot-notes.

**Broach** :—1. Mouth disease appeared on about 4th March and disappeared on the 1st April in 14 villages of the Vágra Táluka, and attacked bullocks and buffaloes, 151 in number, all of which were saved. *Curative treatment* :—Water of boiled tur *(Cajanus indicus)* pulse mixed with ghee administered internally.[1]

2. *Málvi*, or *silia*,[2] appeared about 15th March and continued up to 15th April; 2 villages in Ámod affected. It attacked 72 head of cattle and 171 goats, of which 20 head of cattle only were saved. *Symptoms* :—Swelling on the throat, belly becomes puffed up, evacuations profuse, and the animal dies in 4 hours. The Collector remarks that the disease is said to have been occasioned by want of fodder, and those who could afford to feed their animals could save them. The spread of disease among goats was prevented by the Rabáris having taken their stock to a distant place.

**Surat** :—The affected parts were Párdi and Válod. The principal diseases were :—

1. *Hoof and mouth disease* in 40 villages of Válod (20th January to 12th June) with 1,893 attacks and 1,166 deaths,[3] and in 10 of Párdi (20th December to 25th June) with 340 attacks

---

[1] This treatment was judicious.

[2] This seems to be malignant sore-throat. Ámod was, I believe, the seat of the same disease last year. Scarcity of fodder seems to drive the animals into infected places in search of food.

[3] Either there was a mistake in diagnosis or the animals were very badly treated if the proportion of deaths in pot and mouth disease was so high as stated both in Párdi and (especially) Válod.

and 140 deaths. *Symptoms* :—The mouth gets closed and the animal passes saliva, and is off the feed; sores in the hoof and mouth. *Curative measures* :—In Válod (1) sweet-oil application to the mouth. (2) A plaster of pounded leaves of custard apple, camphor, tobacco and *dikemáli* (*Gardennia gummifera*) tied to the hoof to heal the sores. (3) The animal made to walk over the hot dust in the sun.[1] (4) Application of chunam[2] and dammer (Válod) or (5) chunam and tobacco (Párdi). In Párdi (6) the sick animal is kept apart. (7) Bábhul leaf plaster tied to the hoof, and it is fed with boiled tur (*Cajanus indicus*) pulse.

2. *Small-pox*.[3] —In Válod with 1,219 attacks and 773 deaths in 24 villages (15th March to 3rd June), while in Párdi (March to August) with 164 attacks followed by 90 deaths in 6 villages, confined to the horned cattle only. *Symptoms* :—In Válod, the animal off the feed, the mouth closed, and the skin infested with insects all over the body. In Párdi, the animal became weak, and profuse evacuations followed. *Treatment*:—(1) Pounded bábhul leaves mixed with boiled tur pulse, or (2) clarified butter administered internally.

3. *Pahádio Ratva*[4] was found in 3 villages of Válod (8th-15th May) with 29 attacks followed by 12 deaths, and affected the horned cattle. *Symptoms*:—Swelling appears first on the navel and then spreads over the whole body. *Treatment* :—A brand on the belly below the navel,[5] and on the sides and the back.

4. *Pánínu*[6] *Chadhvu* or *Lohiye bharávavu*—literally fullness of water or blood, appeared (5th October 1888 to 20th July 1889) in Válod (3 villages) and affected 30 bullocks and cows, of which 13 died; in Párdi (2nd November 1888 to 31st May 1889) in 2 villages, with 32 head of cattle affected, of which 7 died. *Symptoms* :—The hair stands on end, the body becomes cold. The animal off the feed and the body bloats up. The animal passes out saliva (Párdi). *Treatment*[7] :—(1) Pills of onions, ajwán (*Carum copticum*) seed, alum and molasses pounded together; (2) strong spirit, administered internally. (3) Cutting and bleeding the ear.

5. *Nalno*[8] *Rog*—disease in the intestines—25th January to 30th May in 3 villages in Párdi. Confined to horned cattle, with 25 attacks followed by 18 deaths. *Symptoms* :—The animal loses appetite and dies instantly. *Treatment*:—Branding.

6. *Cholera* (rinderpest?) in 14 villages of Válod (2nd March to 16th June) with 334 cases of attacks, of which 235 fatal. Confined to horned cattle and sheep and goats. *Symptoms* :—Straining in the muscles; the animal passes out saliva and evacuates profusely. *Treatment*:—(1) A dose of strong spirit mixed with pounded onions and juice of *shekta* (*Moringa pterygosperma*) roots.[9] (2) Circular brand[10] on the throat.

7. *Kanth*[11] *Kopli*—swelling on the throat—affected 4 villages in Válod (1st March to 15th May), confined to horned cattle and goats, with 69 attacks and 43 deaths. *Symptoms*:—Swelling of the throat followed by a tumour and feeble breathing. *Treatment*:—Circular brand round the tumour.

**Kha'ndesh**:—1. *Foot and mouth disease*, locally called *Lálya* or running at the mouth, and *khurgutti* or foot disease, was found in Páchora (6 villages), 14th September to 4th November 1888, with 272 attacks and 244 deaths; Shirpur (26 villages) with 1,085 attacks and 434 deaths, 17th January to 15th March; Nandurbár (4 villages) with 90 attacks and 20 deaths, February; and Yával (2 villages) with 30 attacks and 12 deaths, March to 6th April—confined to cows, bullocks and buffaloes. *Lálya—Symptoms* :—The body becomes black, the ears droop and the animal passes motions.[12] *Treatment*:—(1) A dose of water mixed with pounded gram pulse; (2) of cheese mixed with butter and milk; (3) of water mixed with pounded lemon leaves (Páchora). *Khurgutti—Symptoms*:—Cattle get lame, and insects produced in the foot. *Treatment*:—(1) Application of dammer and kerosine oil to the affected part. (2) Animals made to walk over sun-hot sand or dust. (3) Application of camphor with chunam.[13] (4) Pounded kavath (*Feronia elephantum*) leaves tied to the foot. (5) Rubbing with a cow-dung cake, chimney soot mixed with turmeric powder and salt (Shirpur.) (6) Pounded camphor, mixed with tobacco and custard-apple leaves, tied to the foot (Nandurbár). In the first stage of the disease—(Yával),[14] (7) powder of *ghodmisi* and lemon leaves in butter milk, and after wards (8) pounded gram pulse in water administered internally.

2. *Small-pox*[15]—local name not given—affected 32 villages in Navápur (23rd January to 30th January) with 2,500 attacks and 2,350 deaths, 26 villages in Shirpur (details not given, and 2 villages in Pimpalner (29th to 31st March) with 30 attacks and 13 deaths—confined to cows, bullocks and buffaloes. *Symptoms* :—Erection of the hair, passing motions of blood and risings on the body (Navápur). In Pimpalner, running at the mouth was also observed. *Treatment*[16] :—(1) Flour of tur and jowári in water; (2) pulp of tamarind fruit

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1 A very effectual means of diffusing the disease. 2 Gross cruelty and not likely to be effectual.
3 Probably rinderpest. 4 Either anthrax or simple debility.
5 Ineffectual and barbarously cruel.
6 Diagnosis uncertain, the symptoms given being indefinite. Reads like vegetable poisoning.
7 Treatment judicious. 8 Anthrax probably. 9 Good treatment. 10 Useless and cruel.
11 Malignant sore throat. 12 Probably rinderpest also present in these outbreaks.
13 See note 2 above. 14 This treatment is, in the main, judicious. 15 Rinderpest.
16 Judicious.

mixed with water; (3) powder of *káte shevar* bark in water—all these administered internally; (4) in Navápur, diseased cattle kept apart.

**Ahmadnagar**:—Only one village in Jámkhed was affected (28th April to 10th May) with '*swelling in and about the throat*'[1] confined to cows, bullocks and calves. Total number of attacks was 25, of which 10 were fatal. *Symptoms*:—The animal passed reddish urine and was off its feed. The ears drooped, and a swelling appeared in and round about the neck and throat. The animal tried to be in water owing to the heat with which it seemed to be oppressed. *Treatment*[2]:—(1) Solution of mango pickle and lemon juice diluted in water; (2) *navságar* (sal ammoniac) and sugar in equal parts mixed with a sufficient quantity of water. Both these were administered internally, and those animals which received the treatment in time, are said to have been cured.

**Shola'pur**:—1. *Uch* (Kánarese, rinderpest?) Confined to 5 villages in Sholápur between March and May. Cows, bullocks and buffaloes were affected. The number of attacks 203, of which 116 fatal. The symptoms were those of cholera (rinderpest?). The affected animals passed motions and showed signs of pain in the belly; shivered and refused to take fodder and water. *Treatment*:—Segregation and burying of the refuse and dung of the affected animals outside of the village.

2. *Phare suj*[3], or swelling of the blade of the thigh bone, was found in one village only. It was confined to horned cattle, adult as well as young. The number of attacks was 29, of which all died. It appeared on the 6th May and disappeared on the 31st instant. *Symptoms*:—The animal was off the feed, ears drooped, and swelling of the thigh bone followed by death after two days. *Treatment*:—(1) Juice of *mahárukh* lemon or of *káli tákli* leaves mixed with curds and water. (2) Milk of sheep and goats. Both administered internally.

**Ka'nara**:—1. Rinderpest was found in the following tálukas of the district:—

| Táluka. | Number of Villages. | When appeared. | When disappeared. | Number of attacks. | Number of deaths. | Remarks. |
|---|---|---|---|---|---|---|
| Kárwár ... ... ... | 3 | April ... ... ... | 15th June ... ... | 256 | 178 | |
| Ankola ... ... ... | 1 | 23rd May ... ... | 10th July ... ... | 114 | 99 | |
| Kumta ... ... ... | 1 | June ... ... ... | June ... ... ... | 20 | 12 | |
| Bhatkal ... ... ... | 1 | June 1888 ... ... | December 1888 ... | 86 | 35 | |
| Do. ... ... ... | 2 | 23rd May 1889 ... | 4th June 1889 ... | 8 | 3 | |
| Siddápur ... ... | 3 | 15th May ... ... | 31st August ... ... | 48 | 34 | |
| Sirsi ... ... ... | 6 | August 1888... ... | June 1889 ... ... | 150 | 113 | |
| Yellápur... ... ... | 1 | December 1888 ... | December 1888 ... | 32 | 23 | |
| Mundgod ... ... | 1 | April... ... ... | May ... ... ... | 5 | 1 | |
| Haliyál ... ... ... | 1 | 10th June ... ... | 9th August ... ... | 88 | 62 | |

The disease was confined to the horned cattle only. *Symptoms*:—The body trembles, becomes hot and feverish. The animal off the feed. Rumination ceases. Discharges from the eyes which become red; the ears droop; dullness. The affected animal passed urine on the 3rd or 4th day with offensive smell, and evacutions loose and offensive. In Sirsi, watery discharge commenced on the 4th day and the animal died within 9 days of the attack. In Yellápur the watery discharge was found to be of reddish colour. The disease is locally called *uch* or *dodd rog*, meaning the great disease. *Preventive measures*:—(1) Sheds were kept clean. (2) Affected animals were kept apart. In Sirsi (3) they were fed with dry grass; and sulphur, incense, &c., burnt in the shed. (4) Fat[4] of tiger was administered to unaffected cattle. (5) In Haliyál the dung of the affected cattle was also buried. (6) In Siddápur the affected animals not allowed to drink water. *Curative measures*[5]:—In Siddápur, (1) ears, eyes, face, &c., of the affected animals were washed in warm water; (2) powder of pepper, salt and turmeric mixed together and rubbed to the tongue; (3) opium mixed with liquor was administered internally. (4) Animals were given to drink a gruel of rice and rági. (5) In Sirsi, parts were washed with astringent decoction, and sulphur, incense, &c., burnt in the shed. (6) Opium mixed with boiled onions and sometimes country or Europe liquor administered internally. (7) Wheat gruel was also given. (8) In Haliyál pounded chillies, *ajwán* and *triphali* (*Zanthoxylon rhetsa*) administered internally.

2. Swollen throat, locally called *Gundu rog*, appeared on 27th June and continued till 15th July in 4 villages of Kárwár Táluka, and affected 29 head of cattle of which 23 died; and in one village of Supa with 11 attacks and deaths between 25th May and 1st June. *Symptoms*:—Evacuations loose, the body shivered and the animal refused fodder and water.

3. Foot and mouth disease, locally known as *kálu bái vadal rog*, appeared between 17th November 1888 and 13th January 1889, in one village of Honávar and affected 45 head of

[1] Malignant sore-throat. [2] Treatment, judicious.
[3] This description is ridiculous. An enquiry into this disorder would probably show it to be 'Black Quarter.'
[4] A curious superstition. [5] Treatment, judicious.

cattle of which none died. *Symptoms* :—Sores in the hoof and mouth and saliva passes from the mouth. *Treatment* :—(1) washing the affected parts daily and (2) application of dammer and oil of onions to them. (3) The affected animal fed with dry grass.

**Ratna'giri** is one of the districts saturated with cattle-disease, but the details received are very meagre, as will be seen below :—The principal diseases found in the district this year and which affected all horned cattle and goats were :—

1. *Musalváda*—In 10 villages, from 6th July 1888 to 3rd June 1889, with 866 attacks and 637 deaths.[1] *Symptoms* :—The animal off the feed and watery discharge flowed from the mouth. The affected animal kept apart.

2. *Páy lág*—foot disease—appeared on 12th October 1888 and continued up to 4th May 1889. 23 villages were affected. Attacks 1,735, deaths 96. *Symptoms* :—The animal refused fodder and water, the body became hot, and watery discharge flowed from the mouth, and sores were produced in the hoofs. *Treatment* :—The affected animal fed with ripe plantain fruit. Kerosine oil rubbed to the affected parts.

3. *Kund Peyi*[2] —from 25th November 1888 to 14th June 1889, in 2 villages. *Symptoms* :—Refusal to take fodder and water, followed by puffing of the stomach as far as the throat. Number of attacks 12, of which 8 fatal.

4. *Pháshi*[3] —from 16th March to 25th June. 6 villages and 107 head of cattle were affected, of which 41 died. *Symptoms* :—Animal off the feed, sight diminished, cough, giddiness and dullness. The stomach swelled. *Treatment* :—The swelling part is branded.

5. *Peya*[4] —lasted from 6th April to 24th June in 5 villages, with 84 attacks and 46 deaths. *Symptoms* :—Purging and exhaustion. *Treate nt* :—Sheds kept clean and the affected animal kept separate.

6. *Narad Peya*[5] —appeared between 19th May and 25th June in 2 villages, with 50 attacks and 36 deaths. *Symptoms* :—Rumination ceased, followed by erection of hair. *Treatment* :—Fermented cocoa-palm juice, &c., administered internally and the sheds kept clean and the affected animal kept apart.

7. *Pelu*[6] —found between 8th and 30th June in one village only. It affected 100 head of cattle, of which 75 were saved. *Symptoms* :—A boil in the left side swelled and the animal refused fodder and water. Branding or breaking the *pelu* or swelling is the best remedy.

**Dha'rwa'r**—1. Rinderpest. The following table shows outbreaks of this disease in the several tálukás of the district :—

| Táluka. | Number of villages. | Date of appearance. | Date of disappearance. | Number of attacks. | Number of deaths. | Remarks. |
|---|---|---|---|---|---|---|
| Dhárwár... ... ... | 2 | 12th July ... ... | 27th August... ... | 49 | 36 | |
| Gadag ... ... ... | 8 | 1st March ... ... | 20th July ... ... | 564 | 354 | |
| Mundargi (Peta) ... | 5 | 2nd April ... ... | ..... | 569 | 412 | Still prevalent (October). |
| Karajgi ... ... ... | 14 | 10th November 1888. | 27th May 1889 ... | 448 | 322 | |
| Kalghatgi ... ... | 1 | 11th March ... ... | 23rd March ... ... | 76 | 40 | |
| Kod ... ... ... | 4 | 9th February ... | 19th July ... ... | 500 | 189 | |
| Ron ... ... ... | 15 | 22nd February ... | ..... | 1,097 | 663 | Still prevalent in Kavajgiri (October). |

*N. B.*—Of these outbreaks, that in one village in Kalghatgi only was reported to Government; it is reported to be small and of a mild type, and no veterinary aid was asked for. The total number of attacks was 76, of which 40 died.

The disease was confined to cows and bullocks and buffaloes, male and female. *Symptoms* :—The colour of the affected animal turned black, the hair stood erect, and the animal refused fodder and water; dullness with shutting of the eyes which were red, and discharging mucus; drooping of ears followed. Watery discharge from the mouth and nose. Emaciation followed by the animal falling to the ground. The next day purging commenced, accompanied by bloody discharges; the dung with offensive smell. The animal then after much exhaustion sank and died. In Gadag and Kalghatgi the animal after 2 to 3 days' purging constipated and then died, while in Karajgi, as soon as the animal was affected and was off the feed, did not pass urine, and its stomach was puffed up. Then the watery discharge commenced from the mouth and the nostrils, and blood passed from the bowels; lastly the animal died. In Kalghatgi the animal died within 3 days of the attack, but in other tálukás it lived 7 to 8 days.

*Preventive measures* :—(1) segregation, (2) cleaning of sheds, (3) removal of the diseased animal's urine and dung, and (4) burning the refuse grass. In Ron the dead animals were buried also in addition to the above; in Kalghatgi, where a Mhár was put in charge of sick animals, the skins of the diseased cattle were burned; and in Mundargi Peta, treatment as precribed in the printed book was also resorted to.

[1] This is a very high fatality for foot and mouth disease.
[2] Perhaps anthrax.
[3] Probably hoven.
[4] Rinderpest or dysentery.
[5] Nature, uncertain.
[6] Needs investigation.

*Curative measures* :—Dhárwár—(1) Strong fermented gruel or *kánji* mixed with tamarind juice, sulphate of copper, pounded chillies and powder of *jankingaddi* or *nágarmotha* (Cyperus pertinuis) were administered internally. Gadag :—(2) Juice of *karleki*, (3) onions, (4) mixture of mustard seed and pepper pounded together in water. (These treatments were found most efficacious). Ron :—In addition to the treatment in the printed book (5) pounded roots of *hiregenki* were administered in gruel ; (6) parched *kulthi* (*Dolichos uniflorus*) moistened with warm water was fed to the sick animal; (7) pounded nimb seed mixed with butter milk. Karajgi :—(8) Pounded *hiremad genki* plant mixed with the powder of ginger and nimb seed, (9) liquor mixed with camphor. All administered internally. Kalghatgi :—(10) tongue of the affected animal washed with water mixed with salt and camphor or rubbed with salt, turmeric and butter ; (11) strong fermented gruel with ghee—(12) horse gram, split pulse and jaggery boiled together with ghee, (13) juice of *bermadi* root, all given internally and (14) powder of black pepper, cloves and stems of betel leaves mixed with butter was applied to the eye. Ron :—(15) Tamarind juice with castor oil ; (16) the fat of wild hog with tamarind juice ; both internally administered.

2. *Nadi byani*, or malignant œdema, was found in 3 tálukás of the district : Dhárwár :—One village (12th to 24th July), number of attacks 6, deaths 6 ; Karajgi, 3 villages—December 1888 to 20th July—58 animals were attacked, of which all died ; Kalghatgi, with 2 villages, 25th May to 2nd July. Number of attacks 20 followed by 16 deaths. *Symptoms* :—The affected animal stood still and refused fodder and water. The throat swelled, and the swelling rapidly increased. In Karajgi, ulcers are reported to have been produced in the throat. The animal passed saliva, and the tongue came out. The animal sank, and died after 3 days. *Treatment* :—Branding the affected part was found most beneficial.

3. *Selli*[1] in one village of the Karajgi Táluka. It lasted from December 1888 to 30th April. 15 animals were attacked, all of which succumbed to the disease. *Symptoms* :—The stomach and the back puffed up, the animal sank and died. *Treatment* :—Powder of pepper and ginger mixed with the juice of *karleki* leaves administered internally.

Mr. Steel remarks:—"It will be evident from the above summary—

"(1) That some little knowledge of rational treatment of cattle-disease is becoming diffused through the Presidency. (2) That much remains to be done in this direction. (3) That some native methods are worthy of consideration as rational and successful and bazár drugs properly used are very useful. (4) That other native methods are barbarous and cruel. (5) That only a very small fraction of the cases which occur are reported to the Agricultural and Veterinary Officers of Government. (6) That some districts are very much more backward in dealing with cattle-disease than others. (7) That in the interests of the rayats and of Government (not to mention science) many outbreaks need more exact diagnosis. (8) That the public ignorance on cattle-disease is most profound. (9) That even in a healthy year the losses under the heading cattle-disease are considerable."

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[1] Anthrax.

# APPENDIX C.

*Exports of Indian Wheat from Bombay to all Ports beyond the Presidency from 1880 to 1889.*

| Months. | Year. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... ... | 2,927 | 21,768 | 85,674 | 31,019 | 15,285 | 41,846 | 31,424 | 44,235 | 12,090 | 47,591 |
| February ... ... | 1,626 | 19,275 | 40,239 | 25,403 | 15,933 | 32,366 | 24,484 | 21,379 | 14,419 | 18,567 |
| March ... ... | 3,407 | 20,000 | 30,557 | 29,516 | 14,997 | 45,824 | 28,402 | 26,595 | 23,729 | 26,949 |
| April ... ... | 4,985 | 32,481 | 30,390 | 37,503 | 15,230 | 38,933 | 71,581 | 75,325 | 67,400 | 30,649 |
| May... ... ... | 17,110 | 42,428 | 67,886 | 76,205 | 44,831 | 56,871 | 124,232 | 101,018 | 118,586 | 41,838 |
| June ... ... | 19,407 | 52,236 | 37,190 | 82,881 | 54,894 | 66,602 | 56,341 | 113,946 | 66,165 | 15,934 |
| July... ... ... | 15,055 | 47,369 | 19,386 | 55,921 | 65,437 | 33,379 | 38,715 | 20,172 | 32,841 | 20,382 |
| August ... ... | 7,832 | 28,172 | 5,396 | 32,425 | 45,546 | 38,004 | 52,896 | 12,657 | 32,472 | 23,129 |
| September ... ... | 4,193 | 35,132 | 13,797 | 36,265 | 30,974 | 48,975 | 55,461 | 14,778 | 29,514 | ..... |
| October ... ... | 6,527 | 48,835 | 22,317 | 18,466 | 19,045 | 52,808 | 51,166 | 14,106 | 46,241 | ..... |
| November ... ... | 8,652 | 76,714 | 34,159 | 29,319 | 28,038 | 59,598 | 37,584 | 17,383 | 28,058 | ..... |
| December ... ... | 22,991 | 48,559 | 32,703 | 34,508 | 27,806 | 53,977 | 53,433 | 11,129 | 23,022 | ..... |
| Total ... | 114,712 | 472,969 | 419,694 | 489,431 | 378,016 | 569,133 | 625,719 | 472,723 | 494,537 | ..... |

*Annual Report of the Department of Land Records and Agriculture for* 1888-89.

No. 1474.

REVENUE DEPARTMENT.

Bombay Castle, 22nd February 1890.

Letter from the Director of Land Records and Agriculture, No. 2249, dated 21st November 1889—Submitting the Annual Report of the Department of Land Records and Agriculture for 1888-89; and making remarks.

RESOLUTION.—Mr. Bhimbhái Kirpárám gives a concise account of the varied operations which engaged the attention of his Department during the year, and submits summaries, with comments thereon, of the valuable statistical tables appended to his report. As most of the matters referred to have already been brought to the notice of Government no detailed review of the facts reported seems necessary; but the following observations may be recorded regarding field work and statistics.

2. The Director should in future reports supply information showing what percentage of the crop, waste and boundary mark inspection done by the total number of kulkarnis in each of the districts of Dhárwár and Bijápur has been tested, in the year, by the Circle Inspector staff, and what percentage of the work of the latter has been tested by the Supervising officers of the Agricultural Department, and, if possible, also by those of the Revenue Department. Government desire merely to satisfy themselves generally that the tests have been sufficient in quantity to be of real use as a check on the perfunctory performance of uncongenial duties; and, provided this information is furnished the Director need not, unless there is any special reason for doing so, include in his report detailed statistics of the work, which are of value only to the officers of the districts concerned. So far as can be judged the percentage test taken by the Circle Inspectors, of whom from 3 to 5 on an average appear to be employed in each táluka, was considerably less than the test which in other districts is expected from the staff of general duty kárkuns. The *quality* of the work of the former is probably superior but it is necessary also to secure the performance of a sufficient *quantity*; and it seems clear that at present the field work of the Circle Inspectors must take up a much smaller portion of their time than was occupied in out-door work when they were subject to the more rigid discipline of the Survey Department. In showing the amount of test of boundary mark inspection it appears unnecessary to treat this branch of their work separately under the two heads "Annual" and "Complete."

3. The increase in the area for which statistics are available in Sind is a satisfactory result of the introduction of the Sind Manual, and of the progress of survey operations in that Province.

4. The Director should endeavour before his next report is submitted to secure, in consultation with Collectors, the accurate entry of forest statistics in the returns. Those now supplied are again of no value.

5. The discrepancy between the Director's statements that there was a decrease in the cropped area and an increase in the cultivated area is due apparently to the word "cultivated" in Return No. 2 being used as synonymous with "occupied for agricultural purposes, whether under crops or not." It is questionable whether the term is appropriate, and the Director should be asked whether, with a view to avoid misconception, some other term might not be substituted. He should also be asked under what head in this return "warkas" numbers in the Konkan, which are used more for the growth of ráb material than for cultivation, are now classed.

6. With reference to paragraph 60 of this report, concerning the anna estimates of the outturn of crops it may be observed that the Governor in Council has had occasion when reviewing Collectors' Administration Reports to comment on the apparent, practice on the part of many local compilers of basing their estimates on the assumption that 12 annas instead of 16 are intended to represent an "average" crop. This, combined with the common tendency to underestimate outturn, probably accounts for the untrustworthy nature of the statistics given in paragraph 60.

J. DE C. ATKINS,
Acting Under Secretary to Government.

To

The Director of Land Records and Agriculture,
The Commissioner, N. D.,
The Commissioner, C. D.,
The Commissioner, S. D.,
The Commissioner in Sind,
All Collectors, including the Collectors and Deputy Commissioners in Sind,
The Survey and Settlement Commissioner,
The Accountant General,
The Conservator of Forests, N. C.,
The Conservator of Forests, S. C.,
The Conservator of Forests, Sind Circle,
The Principal, Bombay Veterinary College,
The Superintendent, Horse-Breeding Operations,
The Commissary General,
The Political Agent, Káthiáwár,
The Military Department of the Secretariat,
The Political Department of the Secretariat,
The Public Works Department of the Secretariat,
The Educational Department of the Secretariat.
} With copies of the report.

The Government of India,
The Secretary of State for India.
} By letter.

# ANNUAL REPORT

OF THE

# DIRECTOR, LAND RECORDS AND AGRICULTURE,

# BOMBAY PRESIDENCY,

FOR THE YEAR 1889-90.

Bombay:
PRINTED AT THE GOVERNMENT CENTRAL PRESS.
1890.

BOMBAY BRANCH
OF THE
Royal Asiatic Society.
CLASS

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No. 2260 OF 1890.

FROM

E. C. OZANNE, ESQUIRE, C. S., M. R. A. C.,
Director, Land Records and Agriculture,
Bombay;

To

JOHN NUGENT, ESQUIRE, C. S.,
Chief Secretary to Government,
Revenue Department,
Bombay.

*Poona, 15th November 1890.*

SIR,

I have the honour to submit the **seventh** Annual Report of the Department of Land Records and Agriculture, for the year ending 31st October 1890.

The report will be somewhat late, but my absence at Simla for the Agricultural Conference at the time when the report is usually being compiled, coupled with delay in receipt of the District Returns (see para. 46), is a full explanation.

2. The post of Director was held by Ráo Bahádur Bhimbhái Kirpárám till the end of April when I resumed charge. Mr. Bhimbhái paid four visits to the Government Farm at Bhadgaon in December, January, March and April. He was also present at the Chinchli Show in February and at the Nadiád Show in the same month. I paid three visits to the Bhadgaon Farm in May, July and August. I visited Ahmadabad in June to confer with the Commissioner, N. D., on the subject of cotton trade frauds, and again, under the orders of Government, I met Dr. Voelcker at Ahmadabad on 19th July, and with him visited Nadiád, Baroda, Kelva Máhim, Poona and Belgaum in the Bombay Presidency, Bellari and Hospet in the Madras Presidency, and on the return journey, Poona, Kalyán, Igatpuri and the Bhadgaon Farm. My tour with Dr. Voelcker was made at a most interesting season, and lasted three weeks. We were accompanied throughout by Professor Middleton of the Baroda College, and in Gujarát by Mr. K. B. Jádhav, M.R.A.C., of His Highness the Gáekwár's Service, both agricultural experts. From the 27th September till the 18th of October I was absent from head-quarters to attend the Simla Conference.

3. The department is still without the assistance of the Superintendent of Farms sanctioned in Government Resolution No. 3621, dated 26th May 1890.

The officer selected, Mr. Mollison, is expected shortly.

Ráo Bahádur Bhimbhái has, owing to over-work and anxiety, chiefly arising from his duties connected with the Crawford Enquiry, been reluctantly compelled to sever his connection with the department. Government recognized his faithful service not only by placing him in charge of the department during my absence at Baroda for a whole year, but by granting his request to complete his service for pension at his native place in the comparatively easy post of Treasury Officer at Surat. His loss is greatly felt. He has been succeeded by Ráo Bahádur Ichhárám Bhagvándás, B.A., in the post of Personal Assistant, an officer trained by Mr. Campbell and Mr. Bhimbhái in the office of Compiler of the Gazetteer, and who was with Mr. Bhimbhái transferred to the Department, Land Records and Agriculture, on the completion of the Gazetteer in 1884.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

4. Most important steps have to be recorded towards carrying out the scheme of 1883, which is described in detail in the First Report of this Department, for the reformation of the Bhág-kárkún or supervising branch of the Mámledár's staff, and for the maintenance of the Survey Record on the completion of the work of the Survey Department. The whole subject, including the revision of the Famine Code and of the functions of the Agricultural Depart-

ment, was considered by a Committee in July. The recommendations of the Committee have been accepted. At the same time the Survey Commissioner has submitted proposals for the final winding up of his department in April 1892. The immediate steps advised by the Committee will fit in with the Commissioner's recommendation.

5. Orders have issued directing the transfer to the Collectors of the Survey records of all the Collectorates of the Southern Division by the 1st April 1891. The transfer will be made on the plan, experimentally worked out in the two districts of Dhárwár and Bijápur, the various stages of which have been faithfully recorded in the reports of the Agricultural Department. A selected Survey Assistant Superintendent will be appointed Divisional Inspector, and will, as Assistant to the Director, hold charge of the duties of the Agricultural Department in connection with the re-organized staff. At the same time provisional sanction has been accorded to the immediate equipment of the other Divisions of the Presidency, excluding Sind, with a better paid, more numerous, and better educated staff of supervisors, though the Survey maintenance branch will not be incorporated till the close of the field operations of the Survey Department in April 1892. The Bombay Presidency will therefore be soon provided with a competent Kanungo establishment, such as is entertained in other Provinces.

6. Full advantage will be taken of the facilities offered by the closure of the Survey to leaven the new staff with trained men in all its grades. The position of the Director will be that of a responsible supervisor, charged especially with the duty of preserving uniformity in the working of the inspecting staff under the control of the Collector, and of upholding the traditions of the Survey. His tours will be directed towards bringing to the notice of the Collectors dilatoriness and irregularities. The Divisional Inspector will prepare and submit proposals for future revisions of rates on expiry of current leases; will watch the correction of the Survey record and map by regular inspection of the District Head-quarter Offices in charge of the Records. He will keep a systematic check by field test on the professional, *i. e.* measurement and classing, work of the District Inspector, who in his turn will be the head of the District Survey Office and will be responsible for the correctness of the Survey work of the Circle Inspectors, and for the ledgering of village statistics for use at revisions of rates and for constant inspection by Revenue officers desiring to obtain prompt intelligence of the fluctuations of any village or group of villages, indicating increasing prosperity on the one hand, or deterioration on the other. The District Inspector will further supervise the compilation of the District Statistical Forms in the Collector's office for submission with his review through the Collector to the Director, for the compilation of the Annual Returns of the Presidency, which appear in the Director's Report and are submitted to the Government of India in a condense form for incorporation in the Imperial Returns.

The whole staff from the District Inspector downwards will be strictly under the control of the Collector, who will look to the Divisional Inspector for advice on professional matters. But the check and test of the work of the Circle Inspectors in their duties as supervisors of the statistical registers of the village officers will practically devolve on the Sub-Divisional Officers and Mámledárs in each district.

7. District Inspectors will be graded. The grades will be Rs. 100, 125 and 150, so that a District Inspector, 1st grade, will receive the pay of the lowest grade of Mámledár, and will, when qualified, be eligible for promotion in the Mámledár's grades. The post of Assistant District Inspector will no longer be retained, except in one large district (Khándesh). The pay of Circle Inspectors will be from Rs. 25 to 35, exclusive of a permanent travelling allowance of Rs. 7 per mensem. Recruitment will as hitherto be from the Survey ranks and from the Mámledárs' offices, by selection. The passed Agricultural Students of the Agricultural College will enjoy a preferential claim to appointment on the regular Revenue staff and will, after passing the Revenue departmental test, be eligible for appointment as Circle Inspector, on probation till they have passed a further special test in surveying. Those who proceed to the diploma in Agriculture will have a still higher claim to appointment in the higher grades

of the Revenue service and it is hoped will be permitted to have the same claim as graduates in Arts and Engineering, in order that they may leaven the higher grades of the regular and special branches of the Revenue Department with men whose education specially fits them for the posts of Mámledár and District Inspector, to whom agricultural knowledge is of the greatest use in their every-day work.

8. I now proceed to show the work done by the supervising staff in Bijápur and Dhárwár. By the retransfer of Mr. Price to the Survey Department in 1889, this staff has been without the requisite supervision of a competent Survey officer, and, as will be seen, the work of the special branch has suffered in quality.

9. Apportionment of duties of Circle Inspectors:—

November to February.—Crop, waste and concurrent boundary-mark inspection.

March to May.—Complete boundary mark inspection.

June.—Compilation of táluka statistical returns.

July and August.—Checking village census and vital statistics.

September.—Compilation of táluka census return.

September and October.—Miscellaneous measurement and classing work.*

10. *Crop and waste inspection and examination of boundary marks.*—This is the táluka inspection, required by and recorded in Village Forms 2 to 4. By special sanction the Circle Inspectors confine the boundary mark inspection to all the marks of survey numbers inspected, whether in occupied land (crop inspection), or in unoccupied land (waste inspection), the object of the crop inspection being to improve the statistics of cultivation and that of the waste inspection to detect unauthorized cultivation and encroachment.

*Statement showing percentages.*

| District. | Year. | Villages inspected per cent. | Crop Inspection. Occupied lands percentage inspected. On Survey Numbers. | Crop Inspection. Occupied lands percentage inspected. On Area. | Waste Inspection. Unoccupied Lands Survey Nos. inspected per cent. |
|---|---|---|---|---|---|
| Dhárwár ... ... | Last ... | 78 | 7·58 | 5·49 | 29·02 |
| | Present ... | 97 | 7·73 | 5·63 | 27·17 |
| Bijápur ... ... | Last ... | 85 | 10·37 | 8·99 | 31·29 |
| | Present ... | 95 | 10·09 | 8·39 | 36·77 |

11. All surveyed villages are required to be annually inspected, the whole time for inspection being divided according to the size of the villages, and the number of days of halt at each being thus fixed. Last year the inspection was incomplete because, as reported, the period for inspection was curtailed. It has been practically completed during the present year.

The extent of work done, considering the larger number of villages traversed, is satisfactory. It is a standing order that all the waste should be inspected at least in four years. The year's inspection has exceeded the fixed standard. If the percentage of numbers inspected be taken on occupied and waste numbers together, it works out to 8·8 and 11·2 respectively for the two districts. On the average the daily work amounts to $6\frac{3}{4}$ and $7\frac{3}{4}$ survey numbers, respectively—a slightly better result than that of the previous year and satisfactory when it is borne in mind that all the marks of all the numbers were examined, *i. e.*, on the average about 12 marks per survey number, for marks common to the selected numbers and others adjoining are included in the inspection.

* This work is also necessarily carried on during the whole travelling season, and only that which can be postponed, or which is left incomplete, is disposed of at the close of the year (September and October).

The quality of the work of the village officers, as disclosed by the inspection, does not show improvement. The inspection of waste brought to light 70 cases (Dhárwár 16, Bijápur 54) of encroachment or unauthorized cultivation, of which only 1 in Dhárwár and 3 in Bijápur had been reported by the village accountants. In crop inspection 41 and 50 per cent. of the entries had to be corrected, and 18 per cent. in each district were found blank. The rest were correct. In the boundary-mark examination, the number of marks found by the Inspector in disrepair not noted at the village inspection, or shown as in repair proves how superficial the annual village inspection is, and to this it may be added that 526 marks in Dhárwár and no less than 3,674 in Bijápur were incorrectly entered as in disrepair which were really in repair. It is probable that some, though not many, of these had been repaired between the village and the táluka inspection. On the other hand I have to notice a decided improvement in the attendance of kulkarnis at the Inspector's visit and in the punctuality of their registration. The absentees fell from 29 to 19 in Dhárwár and from 21 to 5 in Bijápur, while the number of blank entries fell from 21 and 20 respectively to 18 per cent.

| | Not shown in the village form as in disrepair. | Shown as in repair. |
|---|---|---|
| | Per cent. | Per cent. |
| Dhárwár ... | 61 | 31 |
| Bijápur ... | 48 | 31 |

12. The superior check exercised by the District Inspector and his Assistant, its extent and result may be exhibited as follows:—

| District. | Crop Inspection. | | Waste Inspection. | | Boundary Mark Inspection. | |
|---|---|---|---|---|---|---|
| | Extent. | Quality. | Extent. | Quality. | Extent. | Quality. |
| Dhárwár ... ... ... ... | 3·3 | 85 | 3·1 | 95 | 3·2 | 95 |
| Bijápur ... ... ... ... | 3·0 | 65 | 4·1 | 99 | 3·2 | 92 |

that is, for instance, in Dhárwár the superior test extended to 3·3 per cent. of the numbers tested by the Circle Inspectors and in 85 per cent. of these numbers the lower test was found satisfactory. All the circles were visited in both districts, the number of villages being 94 in Dhárwár and 115 in Bijápur. The figures of quality show large improvement, but the question left in doubt is whether the superior check was as strict as it should have been and would have been had the District Inspector felt that a Mr. Price would scrutinize his work. The only light which is thrown on this question comes from the general remarks made by the Revenue officers.

The Collectors write:—

*Dhárwár.*—"The total as well as the average work done this year by the Circle Inspectors is shown by the District Inspector to be greater than last year. On the whole, I am quite satisfied with the work done, which is far more complete and methodical than the inspection work done under the old system."

*Bijápur.*—"The amount of work shown here contrasts favourably with that done in the previous year * * * . The above are the results as they appear on paper. But the intrinsic value of them is open to a great deal of doubt. Mr. Harvey, in his report, has drawn attention to certain noteworthy shortcomings, *e.g.*, the general tendency to select for test fields which contain only one kind of crop; and the imperfect nature of the tests applied in the case of fields containing crops of more kinds than one * * * . But it is impossible for a Collector and his Assistants to do all that is necessary in the way of testing the work done by the Circle Inspectors. And I am convinced that the working of the department can never be made quite satisfactory, unless a special European officer is employed again, as Mr. Price was when the system was started; unless the District Inspectors are men of higher grade, greater experience and more authority; and unless the Director of Agriculture himself can give more attention to the department, by visiting the districts in person than has been the case during, at any rate, the past year."

In Dhárwár the crop and boundary-mark inspections were tested in 28 villages by the district officers (sub-divisional). The only remark as to quality is that the work was good, but the extent of the test and its nature are

not indicated. In Bijápur the Collector's Office tested the work of 16 Circle Inspectors but no details are reported. Mr. Harvey in 11 villages tested 116 numbers for crop and boundary mark inspection in 5 circles, in three of which the work was "very bad", in one "good" and in the last "very fair." Mr. Drew tested in 20 villages 54 numbers for crop inspection and 130 for boundary marks; but left on record no opinion as to the result. The District Deputy Collector visited 5 villages and tested 51 numbers for crop and boundary mark inspection, the work done being found "quite satisfactory in every case".

The Collector's remarks seem largely based on Mr. Harvey's report and adverse criticisms, with regard to which the Commissioner remarks: "Sub-Divisional Officers seem to forget that in deploring the want of adequate supervision over Circle Inspectors they are censuring themselves". I need make little further comment. The Collector of Bijápur in heading his paragraph "the working of the Agricultural Department" appears to have forgotten that by the sanction of Government in May 1889 his predecessor accepted the whole control of the special establishment and the duty of supervising it. The Collector was unfortunate in his District Inspector for part of the year, but on his removal an active and competent successor was appointed. In future the Divisional Inspector and the District Inspector will have little opportunity to check this class of work except so far as to lay down the lines on which the test should be made, and the whole responsibility of supervision will devolve on the Sub-Divisional Officers and the Mámledárs.

13. *Check Census of Population and Live-stock.*—This work should be reviewed next in order that all the regular test work of the Circle Inspectors and the check exercised by superior officers may be considered in one place. The Circle Inspectors visit all the villages of their circles in July and August, the only time when the villagers and their cattle are mostly at their homes, and immediately after the completion of the village census by the Kulkarnis. All the entries of Village Form No. XIII are examined in villages with a population under 500, half in larger villages with a population not exceeding 1,000, and one-quarter in still larger villages. The number of villages inspected rose 17 per cent. in Dhárwár, 16 in Bijápur. Some delay in commencement arose from the detention by the Mámledárs of Inspectors for the compilation work, which ought invariably to be fully completed by the end of June. Work was impeded also by the absence of the Kulkarnis at the date of the Inspector's visit. As the villages are visited in order and on fixed dates, there is no reason why this impediment should be allowed. In all 46½ and 49 per cent. of the entries in Village Form XIII were checked in the visited villages as against 47 and 49 respectively in Dhárwár and Bijápur last year. Of the entries checked 77 per cent. and 70 per cent. respectively as against 76 and 73 per cent. in the two districts were passed as correct, *i. e.*, a small improvement in Dhárwár but falling off in Bijápur. I may add that no provision whatever is made for any such check of the village census in other districts.

14. As to vital statistics the Circle Inspectors at the time of the check census are required to make a regular test of Village Forms XIV and XIV A—D, but as the results of this regular check and of the irregular check made at every visit to a village are reported direct to the Mámledár for transmission to the Deputy Sanitary Commissioner, no figures are available for report in this place. The subject is however important, and if Government so desire, statistics will in future be called for. The Deputy Sanitary Commissioner, Southern Registration District, acknowledges the valuable assistance of the Circle Inspectors of Bijápur and Dhárwár.

15. The census was checked in 100 villages of Dhárwár but in only 2 of Bijápur by Sub-Divisional Officers. The only remark in Dhárwár is that the work was found good, but the extent and nature of the check exercised are not indicated. On the other hand, the District Inspector and his Assistant checked 3·1 and 4·4 per cent. respectively in Dhárwár and Bijápur of the entries tested by the Circle Inspectors, visiting 50 villages in 33 circles out of 37 and 74 villages in 32 circles out of 38 respectively in the months of July and August, the object being to guide the work of each Inspector on the lines laid down rather than to make a large test.

16. From March to May the Circle Inspectors carried on the complete boundary mark inspection on the revised plan instituted last year. I have in

detail reported in my letter No. 1125, dated 26th June, on the remarks made by Government in the concluding sentence of paragraph 2 of the Resolution which reviewed last year's report and, I trust, have made it plain that the progress of this inspection must be shown separately from that of the inspection made concurrently with the crop and waste inspection already described. The system is detailed in paragraph 9 of last year's report, the only change being that of making the Inspectors responsible for the repair of the marks found out of repair—a change approved by the Collectors. The number of villages in which the complete inspection has been made is shown marginally. At this rate the whole district will be traversed in less than 10 years, *i. e.*, with the present staff all the marks demarcating the village site, tanks, roads and unoccupied numbers, including numbers set apart for public or special purposes, and the village boundaries will be systematically inspected and repaired once in ten years. The necessity for such periodical revision is well shown by the results of the inspection. No less than 23 and 27½ per cent. of the marks inspected this year were found out of repair in the two districts respectively and similarly no less than 220 and 185 encroachments were detected. The steps taken to cause repairs to be done were fairly effective. The second inspection was not completed, 37 per cent. in Dhárwár and 13 per cent. in Bijápur of the marks found out of repair at the first inspection not being re-inspected. But of those re-inspected 81 per cent. in Dhárwár and 92½ per cent. in Bijápur were either found repaired or were repaired. The figures last year were 40 and 20 when the repairs were left to the Kulkarnis. A large number of marks demanded measurement to re-fix their position. It would be well if the Collectors insist on the completion of the non-completed second inspection before any new village is taken up next March.

| | Last year. | | Present. | | Total. |
|---|---|---|---|---|---|
| Dhárwár ... | 170 | + | 144 | = | 314 |
| Bijápur ... | 268 | + | 177 | = | 445 |

The decrease in villages and work done is chiefly due to the change noticed, but also to a prevalence of influenza.

17. It is necessary to show in detail the work done by the Inspectors as measurers and classers. This work does not decrease.

**Statement showing the Measurement Work done by the Circle Inspectors.**

| No. | Classes of Cases. | Dha'rwa'r. | | | | Bija'pur. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Arrears on 31st July 1889. | New Cases. | Disposed of | Arrears on 31st July 1890. | Arrears on 31st July 1889. | New Cases. | Disposed of | Arrears on 31st July 1890. |
| 1 | Partitions of land under decree of Court ... | 7 | 60 | 65 | 2 | 3 | 7 | 7 | 3 |
| 2 | Sub-divisions on applications of occupants duly sanctioned ... ... ... ... | 22 | 20 | 29 | 13 | 3 | 8 | 8 | 3 |
| 3 | Disputes necessitating re-measurement of fields ... ... ... ... ... | 32 | 52 | 52 | 32 | 18 | 30 | 40 | 8 |
| 4 | Disputes requiring fixing of marks by the field books ... ... ... ... ... | 176 | 225 | 247 | 154 | 110 | 251 | 218 | 143 |
| 5 | Encroachments ... ... ... ... | 132 | 267 | 312 | 87 | 73 | 238 | 244 | 67 |
| 6 | Measurement of alterations caused by alluvion and diluvion ... ... ... ... | 45 | 60 | 65 | 40 | 32 | 87 | 81 | 38 |
| 7 | Measurement of land required for public purposes— | | | | | | | | |
| | (*a*) Extramural burial grounds ... ... | 17 | 43 | 51 | 9 | 7 | 26 | 18 | 15 |
| | (*b*) Tanks ... ... ... ... | 13 | 6 | 16 | 3 | ... | ... | ... | ... |
| | (*c*) Roads ... ... ... ... ... | 17 | 18 | 17 | 18 | 1 | 19 | 13 | 7 |
| | (*d*) Dharmashálas and other public buildings ... ... ... ... | 7 | 6 | 10 | 3 | ... | 1 | 1 | ... |
| 8 | Measurement of land for building sites ... | 53 | 166 | 164 | 55 | 39 | 233 | 235 | 37 |
| 9 | Re-classification of survey numbers ... | ... | 7 | 6 | 1 | 1 | 3 | 2 | 2 |
| 10 | Miscellaneous ... ... ... ... ... | 111 | 214 | 246 | 79 | 118 | 523 | 517 | 124 |
| | Total ... | 632 | 1,144 | 1,280 | 496 | 405 | 1,426 | 1,384 | 447 |
| | Non-measurement cases— | | | | | | | | |
| | Prescribed by the rules ... ... ... | 564 | 3,472 | 3,415 | 621 | 122 | 726 | 725 | 123 |
| | Not prescribed by the rules ... ... | 40 | 417 | 417 | 40 | 8 | 174 | 179 | 3 |
| | Total ... | 604 | 3,889 | 3,832 | 661 | 130 | 900 | 904 | 126 |
| | Grand Total ... | 1,236 | 5,033 | 5,112 | 1,157 | 535 | 2,326 | 2,288 | 573 |

Measurement work (Nos. 1—10)—New cases decreased by 10 per cent. in Dhárwár but increased 20 per cent. in Bijápur, the increase on the whole being 4 per cent. The arrears on 31st July which are usually disposed of in September and October have considerably fallen in the former and slightly increased in the latter district. The Collectors do not report the fees received for the work done under heads 1—4. There is no doubt that the orders of Government authorize the demand for payment for such work (Government Resolutions No. 1993 of 14th April 1890, Judicial Department; No. 1325, dated 16th February 1889, and No. 745, dated 29th January 1890). The point will be brought to the notice of Collectors.

The total number of cases disposed of rose by 17 and 62 per cent. in the two districts respectively and the percentage of arrears on the total number of cases for disposal has fallen by 4 and 7 respectively. This is satisfactory.

18. I think it necessary to show the statement hitherto shown for "Head-quarter Office Work," because this table proves whether the work of correction is up to date or in arrears :—

**Statement showing the Head-quarter Office Work.**

| District. | Number of Cases received necessitating correction in Survey Records. | Number of Ákárbands. | | Number of Maps and Field Books corrected. | Number of extracts from Field Books sent to Circle Inspectors. | Number of extracts from Survey Books supplied to Revenue Officers and Petitioners. | Number of Maps supplied to Village Officers. |
|---|---|---|---|---|---|---|---|
| | | Corrected. | Remaining to be corrected on 1st October. | | | | |
| Dhárwár ... | 51 | 102 | 14 | 911 | 962 | 71 | 200 |
| Bijápur ... | 205 | 74 | 2 | 548 | 225 | 7 | 343 |

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

19. This subject was discussed at the Simla Conference. The Statistical Atlas of the Bombay Presidency was recommended as a model among others. Without anticipating the report of the Conference, I may say that it is very desirable to imitate the North-West Provinces Pargana Book in this Presidency. No province can claim to have village statistics superior to ours, but the Pargana Book annually collects the main facts of each village from the various registers into one form. The Survey Commissioner in Bombay keeps a similar village ledger which, however, only shows what is called the "Revenue History" in Settlement Reports. More is required. The Committee appointed by Government Resolution No. 3664, dated 27th May, in paragraph 14 of its report has shown exactly what is necessary, *viz.*, the ledger of village statistics, year by year, required both for famine needs and for revisions of rates. The materials are at hand, but they must be compiled from the date of the last settlement in each village by the Circle Inspectors, each for his circle, so that the pargana book will be a circle book, so arranged that there will be no difficulty in transferring the ledger of any village from one to another circle book and with blank pages, as in the North-West Provinces, for the remarks by itinerant officers of all departments, when such officers in their tours notice any noteworthy fact and wish to record it. The circle book will serve the purposes of the Settlement Officer, and will be a most valuable record for the perusal of District Revenue Officers, especially those new to a particular charge, and will indicate deterioration, should any deterioration occur in any village or group of villages, and either show the reason or indicate the necessity for ascertaining it. Lastly, the circle book will give all the materials for the detailed analysis of districts with reference to security from famine which may be summarized in periodical editions of the Statistical Atlas, or in supplements to the Atlas. I note these remarks here for no orders are required from Government. But I believe that the circle book will be appreciated by the Collectors and their Assistants, and I only need their co-operation.

20. The Bombay Famine Code has been revised by a Committee appointed at the instance of the Supreme Government. The alterations desired by that Government were principally with respect to the "duties before famine" and have been practically met by the incorporation of the special rules for Circle Inspectors, already sanctioned, into the Famine Code.

## III.—SYSTEM OF COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

21. During the year no special measures have been called for under Chapter VI of the Bombay Famine Relief Code.

## IV.—MEASURES OF PROTECTION, including—

1. *Fodder Reserves and Arboriculture.*
2. *Extension of Communication.*
3. *Irrigation.*

### (1). *Arboriculture.*

### *Bábhul Plantations.*

22. A perusal of the information supplied to me under this head leads me to fear that the course which I know to be noxious and harmful is being allowed in some districts. I have repeatedly stated that though bábhul is a most valuable tree, if confined to set areas, it is one of the most harmful in the presence of dry-crop cultivation, especially in the rabi season. I have in various reports annually given proofs (*vide* especially report of 1885-86, paragraphs 27 to 32, and of 1886-87, paragraph 13) and yet the tendency is apparently towards *inducing* cultivators to plant their headlands with bábhul. From Hyderabad it is reported that extensive avenues along roads have been planted, and cultivators, alive to their interests, are growing bábhul in parts of their fields. If this is in irrigated land, the benefit may be great, but the object of the concessions offered by Government was to induce cultivators to set apart whole fields or defined portions of fields for bábhul plantations. From Násik, a dry district, though the district officers have endeavoured to induce rayats to set apart fields for bábhul plantations, the only result reported is an increase of bábhul on the headlands of fields. This is to be regretted. Immense harm was done in Khándesh (see Report of 1885-86, para. 29) by the misdirected influence of district officers in this direction. The result of Mr. Ashburner's experiment on the Bhadgaon Farm therein reported is evidence enough. There is only one instance of the commencement of a bábhul plantation during the year on the plan of the Government offer, *i. e.*, in the case in Bhimthadi (last year's report, paragraph 18). Orders have been issued by Government that remission of assessment may be granted as long as the land is kept under bábhul. The Collector however has postponed the remission "till the plantation has actually been formed." It will never be formed under those terms and they do not appear to be the terms intended by Government in their Resolution No. 6282, dated 5th August 1884, which are that remission may be allowed to *induce* the setting apart of fields in occupation for bábhul-growing. The Malthan plantation started under the concession has been handed over to the Forest Department. The plantations on the Bhadgaon Farm in two fields of four and two acres are progressing very favourably, but the experiment is still in progress. The possibility of thus utilizing cultivable land with profit cannot be decided till the plantations begin to yield an annual return from the wood and grass. One remarkable fact has come to notice. Where the young bábhul is growing near the headlands, covered with established bábhul trees, it has failed. Bábhul shade is so bad that it prevents even bábhul from growing.

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

### *A.—Experimental Farms.*

23. Government have been pleased to approve of in general the proposal to increase the number of experimental farms made by the Committee appointed under the Government Resolution No. 3664, dated 27th May last. The Director has also been desired to submit a detailed scheme showing precisely how he would propose to give effect to the suggestions of the Committee. Government

have also sanctioned the appointment of Mr. Mollison as Superintendent of Farms, Bombay Presidency.

**Bhadgaon Farm.**

24. The rainfall at the farm was very low again, but its distribution was very favourable to the two staples—cotton and jowári. In spite, then, of a rabi season so dry that only the very first sown crops of that season gave any outturn at all without irrigation, the financial result was very good:—

| | Area cropped or fallowed. | Assessment. | Gross Value of Produce. | Net Profit per Acre. | | |
|---|---|---|---|---|---|---|
| | Acres. | Rs. | Rs. | Rs. | a. | p. |
| General area ... ... ... | 407 | 576 | 8,681 | 10 | 6 | 0 |
| Experimental crops ... ... | 63 | 82 | 644 | 0 | 9 | 6 |
| | 470 | 658 | 9,325 | 9 | 1 | 0 |

Thus, even taking into count the experimental area and debiting the assessment, a net profit of over Rs. 9 per acre was secured. The incidence of assessment on gross produce in the general area was less than 7 per cent. and on net produce a little over 13½ per cent. These figures would have been improved if irrigation had been resorted to for the late crops; but experience has shown that such a course would have encouraged weeds and been harmful in future years. Advantage was taken of the absence of rain to clean 35 acres of land at a cost of Rs. 165 (included in the total cost), though from these fields there was no immediate return.

The breeding herd swallowed up a large share of the profits of cultivation as it must necessarily do. It can never pay directly to breed cattle on a Government Farm though indirectly the results justify the cost of the herd, for its surplus is distributed by sale in the neighbourhood and the village cattle are greatly improved by the services of the young bulls sold from time to time. Nine such bulls were sold at an average of Rs. 58, only two of which were over three years old. These two fetched Rs. 75 a piece.

The sales of produce have met all cultivation expenses, excess keep of livestock, miscellaneous charges necessitated by sanitation and the isolated position of the farm, the cost of the Superintendent's frequent tours, and that of the clerical establishment, which is required to keep a minute record of every result obtained on the experimental as well as on the general area.

Large expenditure has been incurred during the year (Rs. 11,700) in building a new granary, quarters for the clerks, a masonry silo (Rs. 300), and in extending the cattle byres and repairing those already existing. Two per cent. of this cost in the case of new works and 5 per cent. in the case of repairs have been debited to the accounts of the year already burdened by a small sum debitable on account of previous permanent improvements.

On the whole the net cost of the farm has been Rs. 743 as against Rs. 990 in the previous year. The pay of the Superintendent (Rs. 3,000) is not included.

The experimental results though not numerous were important.

*Sugarcane.*—In sugarcane cultivation it was shown that by sowing the tops of canes, instead of cutting whole canes into sets, a saving of some Rs. 15 per acre can be effected.

Two varieties of cane from the Saháranpur Botanical Gardens, styled Lahona and Lahima, were tried, but they compared unfavourably with the local white (? Mauritius) variety.

*Wheat.*—But the most important results were secured with wheat and cotton. The sixth season of experiment with soft-white and soft-red wheats seems now definitely to prove not only that the soft varieties can be cultivated without appreciable change in colour or consistency in a district of hard wheats, but that they, as well as hard wheats from other parts of India, after one or two years of poor yield, become acclimatized and give crops of grain and straw far in excess of the best local varieties.

As regards consistency, the earlier results of the trial seemed in the soft kinds to indicate a tendency to harden, but with irrigation that tendency has disappeared and it does not seem premature to assert that in irrigated land in the Deccan it is profitable to grow soft white wheat provided it is acclimatized; and it is certain that excellent results will be obtained with hard wheats—irrigated as well as dry—if outside seed is introduced, provided a short crop for the first year can be afforded.

*Cotton.*—The results in cotton are more numerous. Sea Island cotton has produced a few bolls and may improve.

Four varieties of American cotton, imported in 1886 and grown for one year in Dhárwár and then transferred to the Bhadgaon Farm, hardly returned the seed in the first year, gave a very poor crop in the second, but in the third beat all other varieties, even the short-stapled Varádi. Of these importations, the one (Louisiana), with the best staple, is yet far behind the others. Two others (Memphis "Allen," and Arkansas "Upland") have a harsh coarse fibre, but the last, Memphis "Bruder," with a good strong staple, yielded the best crop (198 lbs. clean cotton per acre). The local Varádi gave only 110 lbs.. If Louisiana improves, as is possible, choice for distribution and for new importations should apparently be made from that and from the "Bruder."

Side by side with these results, excellent returns were secured from selected Bani cotton—good staple—from the Berárs (149 lbs. clean cotton per acre). Another good variety from the same province, Jari, is a cold weather variety sown later and taking longer to mature. It does not seem likely to succeed in Khándesh.

It is certain that if success is secured with these better staples, a reaction in their favour will set in. The now falling price of cotton may aid the reaction. For some years everything (price, colour, utility for mixing and yield) has been in favour of the local Varádi, which Dr. Watt declares to be a hybrid, not indigenous to Khándesh or the Berárs, as hitherto it has been considered to be.

**Poona Farm.**

25. This farm is intended as a means of imparting practical instruction to the students of the Agricultural Branch of the College of Science. Thirteen acres of new land have been brought under cultivation. The season was poor and the greater part of the land uneven and unfruitful. No part is fit for comparative experiment. Arrowroot has again been successfully grown, but there is no market for it.

The cultivation charges on the farm were Rs. 742. The assessment on the land is Rs. 90. The produce sold for Rs. 791. The old Botanical Gardens at Ganeshkhind are supervised by the Assistant Superintendent in charge of the Poona Farm. The sales of grass and mango grafts (Rs. 847) just suffice to cover the expenses of tending and watering the planted graft mangoes. These now number 1,500 well established grafts. The sale of mango grafts continues. Rs. 95 were realized under this head during the year. Grafts are sold at cost price to cultivators and at a profit to others. There were 300 good grafts ready for sale at the close of the year.

A small dairy herd is kept on the Kirkee portion of the farm. It is a beginning in the study of milking capacities of various breeds, feeding of milch cattle, crossing to improve local breeds, and the like. But the use to the agricultural students of such a herd to teach them something about the management of cattle is also important. The Assistant Superintendent (pay Rs. 100 per mensem) gives farm-classes to the students.

**Nadiád Farm.**

26. The reports received from the Agricultural Association of the working of this private farm are still very sketchy. The management of the farm is not good. Some of the first principles of good cultivation have been neglected. The Association will be called on to improve the management, else the assessment on the land, the remission of which is allowed as long as the farm is usefully managed, will have to be demanded. In other departments the Association has continued to do good work. It has established a museum and arranged show-exhibits in it.

It has continued its Show (as will be seen from paragraph 41 below). Its pamphlet is flourishing. Its seed store is kept up, but is not yet a success. Financially the Association is successful. Its balance is about Rs. 8,500.

**The Sind Farm (Hyderabad).**

27. The Hyderabad Farm is now under the charge temporarily of the Local Board (Government Resolution No. 8422, dated 5th November 1889). The Board has not continued the experiments which were in progress at the time of the transfer, nor has it kept up the cultivation book and other registers, so that no results can be reported.

*B.—Experiments on various Indigenous and Exotic Products.*

**1. Wheat.**

28. Selected Muzaffarnagar seed wheat was again distributed in the Nára Valley of the Thar and Párkar District. The grant from Government was Rs. 1,000, and from Local Funds Rs. 500, but sanction came late, and in all only 67 maunds of fresh seed were imported, though with the Local Fund money 220 maunds of acclimatized seed were purchased and distributed. The area now under this variety is 4,100 acres, as against 2,812 acres reported last year. Frost slightly reduced the yield this year. The following table shows the results :—

| Kind of Seed. | Area sown in 1889-90. | Total Seed sown. | Total Outturn. |
|---|---|---|---|
| | A. g. | Mds. s. | Mds. s. |
| New seed imported by Government ... ... | 52 23 | 63 20 | 240 10 |
| Acclimatized seed purchased by Local Funds ... | 162 19 | 219 33 | 937 0 |
| Do. Government share of previous year's produce ... ... ... ... | 285 1 | 357 32 | 1,682 26 |
| Do. Jamindár's share ... ... ... | 3,607 11 | 4,738 26 | 15,040 0 |
| *Add*—Reapers' share ... ... ... ... | ..... | ..... | 2,237 19 |
| Total ... | 4,107 14 | 5,379 31 | 20,137 15 |
| Average per acre ... | ..... | 52·4 | 4·36 |

*Note.*—1 maund = 82⅔ lbs.

**2. Date-palm.**

29. Seed of the Egyptian date-palm was distributed in 1888. The seedlings have been planted out, and are reported to be doing well.

Mr. Duthie, Director, Botanical Department, North India, kindly supplied 7 lbs. of seed again this year which was distributed in March and was sown between April and June. The seedlings have come up well except in Bijápur.

The Djereed date-palm seed supplied to the Commissioner in Sind in June 1889 was distributed as noted in the margin. In Kotri in Karáchi, as previously anticipated, the plants have made good progress. In the municipal garden more than 3,400 seedlings are growing. In the economic garden at Hyderabad 545 seedlings have been planted out. Elsewhere in Hyderabad and also in Shikárpur the seed sown has germinated and the plants promise well.

| | Sers. |
|---|---|
| Collector of Karáchi ... ... | 10 |
| Municipal garden at Karáchi... | 8 |
| Meer's garden at Karáchi ... | 2 |
| Collector of Hyderabad ... | 10 |
| Collector of Shikárpur ... | 10 |

**3. Arrowroot.**

30. Mr. Gogte in Dápoli (Ratnágiri) produced 8,000 lbs. of starch on 10 acres. The Commissariat demand has been very short and no other market has yet been found. Arrowroot was grown also at Gondal and at the Poona Farm.

**4. Indigo.**

31. Junágad had 30 acres under this crop and the Mahi Kántha Agency at Sádra reports 1 bigha of indigo. Thus the endeavours to revive its cultivation in Gujarát are continuing.

### 5. Divi-divi.

32. A test shipment of pods was made this year of about $3\frac{3}{4}$ tons, the produce of about 150 trees on the Bhadgaon Farm for two years. The trees are along a nála bank, but if regularly planted out, would occupy about three acres. Picking the pods and filling the bags cost Rs. 22-8; bags, Rs. 28-2; railway charges, cartage, freight, Rs. 166-3; charges in Liverpool, Rs. 38-10; total Rs. 255-7. The consignment sold for Rs. 409-11 or Rs. 111-4-6 per ton. The profit was Rs 154-4. This is equivalent to Rs. 26 per acre per annum, which must be considered an excellent return. This result is encouraging to the extended cultivation of divi-divi.

### 6. Strawberry.

33. In December of 1887 about 2,000 strawberry plants were procured through the Superintendent, Botanical Gardens, North-West Provinces, Sahárán-pur, at the rate of Rs. 4 per 1,000 and sent to Mahábaleshvar, where they were distributed for experimental cultivation. The plants arrived late in the season and many died on the way. A poor crop has been picked, but the fruit is reported to be excellent.

## *C.—Utilization of Bones for Manure.*

34. The export trade in bones is increasing. Bone-mills have come into existence to cheapen carriage by crushing to one-inch bones and by grinding to meal. In the form of bone-meal there will be no difficulty in using bones for manure, though their precise value will have to be experimentally studied. It was decided in 1883 not to attempt to check the export directly by a heavy tax or in any other way but to trust to the gradual rise of a counter-demand for manure. This demand has not yet arisen, but the facility now for obtaining bone-meal may induce it. It is necessary that I should record the result of enquiries made.

There are 7 mills in Bombay and 1 at Thána. The latter is a large one, recently opened by Messrs. Croft & Wells. Bones are bought by itinerant dealers, chiefly Musalmáns, who employ the low-castes of villages to collect them. These petty dealers either sell direct to exporters who employ the Bombay mills or to larger dealers. It is estimated that some 10,000 tons are annually collected. The prices paid in Bombay vary from Rs. 35 to 45 per ton, but are rising. Conversion to one-inch bones costs about Rs. $2\frac{1}{2}$ and to bone meal about Rs. 5. The prevalent prices last season in England for the prepared bones were £4-10 and £5 respectively.

The imports by sea of bones to Bombay for export to England come chiefly from Cutch and Káthiáwár. The rail imports are larger. The difficulty of collection in the Konkan has so far prevented much export therefrom.

## *D.—Takávi Advances.*

*Amounts advanced in 1888-89.*

| Northern Division. | Rupees. | Central Division. | Rupees. | Southern Division. | Rupees. | Sind. | Rupees. |
|---|---|---|---|---|---|---|---|
| Kaira ... ... | 1,300 | Ahmadnagar ... | 10,316 | Belgaum ... | 33,320 | Karáchi ... | 5,800 |
| | | Khándesh ... | 15,072 | | | Hyderabad ... | 4,550 |
| Panch Maháls ... | 2,400 | Sátára ... ... | 1,816 | Bijápur... ... | 585 | Thar and Párkar ... ... | 4,045 |
| | | Sholápur ... | 3,262 | | | | |
| Broach ... ... | 535 | Násik ... ... | 50 | Ratnágiri ... | 320 | Shikárpur ... | 2,800 |
| | | | | | | Upper Sind Frontier ... | 600 |
| Total ... | 4,235 | Total ... | 30,516 | Total ... | 34,225 | Total ... | 17,795 |

35. The figures show no blank district in Sind, but only Ratnágiri in the Konkan made any use of the advances offered by Government. The repayments were punctual on the whole, but in Khándesh, Ahmadnagar and Karáchi the overdue outstandings are large. Belgaum is conspicuous in the statement. Great efforts have been made by the Collector to overcome the little understood difficulties which keep the cultivator from utilizing to the full the great facilities offered. During the year ending June advances in this district were made to 142 persons. Rs. 10,730 were advanced for constructing and repairing wells and enlarging

tanks, Rs. 8,877 for clearing fields of deep-rooted grasses, Rs. 7,238 for raising protective embankments, Rs. 6,760 for converting dry-crop into rice land, Rs. 350 for purchasing cattle and Rs. 825 for removing prickly pear in cultivated land. The details are noted to show how greatly agricultural improvements can and should be effected by means of these advances on low interest.

Referring to his observations on the dry north-east tálukas, the Collector says:—"I saw several wells for irrigation, also a small tank or two, lately constructed there; lands never cultivated before, freshly brought under cultivation; lands cleared of the *natt* grass; culturable land brought into existence by means of embankments constructed to intercept the alluvial deposit, washed down in the monsoon from the higher lands; stone ramps thrown up to protect good land from the action of neighbouring streams, and so forth." These improvements, but for these advances, would never have been taken in hand. The improvement in Belgaum has been effected by the interest taken by the district officers, and there seems no reason to think that similar results cannot be attained in the same way elsewhere. Notifications were posted in every chávdi and school throughout the district. "The numberless applications now received show that the matter is now to some extent attracting the attention that it deserves; but they also show that the public is to a great extent still under a misapprehension." Many applications are received for money to be expended on the payment of ancestral debts or for marriage expenses to be incurred.

The increase of work has called for an addition to the clerical staff and the appointment of three clerks to be paid out of the takávi grant in Belgaum has been experimentally allowed for one year.

Under recent modifications in the rules under the Land Improvement Act the ordinary rate of interest has been lowered from $6\frac{1}{4}$ to 5 per cent., and that of compound interest for any sum not paid when due, from $6\frac{1}{4}$ to 6 per cent. A corresponding lowering of interest has been sanctioned in respect to loans for the purchase of cattle, seed and implements.

The work of clearing village sites of the over-growth of prickly pear seems to have been systematically conducted in Belgaum. Within a period of five years 477 villages have been cleared up to a distance of 100 yards from the village site. In some cases the villagers have been induced to subscribe large sums and to make the clearance by hired labour.

*E.—Locust attacks of the year.*

36. Locusts were harmful in Sind from July 1889 till September 1890. They lingered longest in the Thar and Párkar and Upper Sind Frontier Districts. The locusts did considerable damage. Their visits are not infrequent, but on this occasion they came at an unusual time. It is reported that they were exterminated by jowári birds. The Deputy Commissioner reports that the birds did not attempt to eat the locusts, but snipping them in two, left them.

Mr. Ommanney in 1883 mentioned the jowári bird or Rose Pastor as a great enemy of the locust in Khándesh.

Locusts visited Cutch and Gujarát and parts of Káthiáwár, but were not injurious. Specimens were sent to the Superintendent, Indian Museum, Calcutta, for identification. Besides the samples of locusts, samples of grasshoppers (hieroglyphus) from the Panch Maháls, Rájpipla and Broach, of Hieroglyphus furcifer, and Chilo oryzacellus from Thána, of Heteropterius from the Upper Sind Frontier and Jhálávád (Káthiáwár) and of Poecilocera picta from Jhálávád (Káthiáwár) were sent to the Indian Museum. Hieroglyphus was reported to do damage to maize, rice and bávto. "So far as is known, they do not migrate and can therefore scarcely be looked upon as locusts." Mr. Cotes is of opinion that it is not worth while to take special measures for destroying them. As regards Hieroglyphus furcifer Mr. Cotes writes: "The insect is a grasshopper, allied to the migratory locusts, but probably is one of those forms which do not migrate or often occur in sufficient numbers to occasion serious injury. The insect is therefore entirely distinct from the

migratory locust. * * With regard to remedies the insects being now almost all in the imago or winged stage, I don't think that much can be done beyond perhaps beating them off the crops." The rice bug from Thána is reported to have done damage. "The insect proves to be the caterpillar of a small moth, either identical with or very closely allied to, the rice stalk-borer (Chilo oryzacellus) of the United States.* *With regard to remedies, the observations of Mr. Howard in the United States, and of Mr. Wray in Perak, have shown that the insect passes the time between the harvesting of one crop and the springing up of the one in the following year in the self-sown rice, and perhaps also in the stems of large grasses which spring up in and around the fields. The careful destruction therefore of these after the harvest by burning has been thought to be the most promising means of reducing the numbers of the pest." About Poecilocera picta Mr. Cotes states that little is known about its habits but it is not expected that it will be found to occur in sufficient numbers to do any considerable damage.

*F.—Improved Agricultural Implements.*

37. I have lately purchased for the Bhadgaon, Poona and Nadiád Farms "Planet Jr." horse and hand hoes. The implements have been tried on the farms and have been found useful. The Superintendent of the Bhadgaon Farm reports that the horse hoe is specially suited for cultivation for the rabi crop during the monsoon and for the interculture of cotton. In his opinion it is light, strong and cheap for its high finish. On the Poona Farm the horse hoe was used in preparing land for wheat and the hand hoe in hoeing capsicum. As regards the Nadiád trial, Sirdár Ráo Bahádur Bechardás Viháridás writes that considering the dry nature of the soil the furrows were sufficiently wide and deep and the draught was not heavy. He thinks that the horse hoe would work still better in the wet season, but fears that "the ordinary cultivator will not be able to manage it and the ordinary smith will not be able to repair it on emergency."

Messrs. Lloyd Lawrence and Co. of Philadelphia, United States of America, who are the manufacturers of these implements, have appointed Messrs. John Fleming and Co. of Bombay their Agents for these implements. The horse and hand hoes respectively are sold for Rs. 33 and 16.

*G.—Adulteration of Wheat.*

38. The Conference on adulteration and refraction in wheat under the presidency of Her Majesty's Secretary of State appears to have led the Committee of the London Corn Trade Association to agree to limit refraction in samples of Bombay wheat to 3 and 3½ per cent. according to the time of shipment and similarly of Calcutta "No. 2 club" to 4 and 5 per cent.

Shortly afterwards a proposal to introduce Elevators was brought before Government. The proposers asked for many concessions. Grain Elevators will not easily succeed, for there is an absence as yet of a real demand for pure wheat. As long as the manipulation of the comparatively pure sample sold by the producer can be turned to profit by the middleman, and as long as the cultivator cannot get a higher price for cleaner wheat, the scope of Elevators does not appear large. Some of the concessions asked could hardly be granted, *e.g.*, a guarantee of interest on capital outlay and a long monopoly.

Appendices A and B show the exports of wheat from the ports of Bombay and Karáchi since 1880. The exports from Bombay exhibit a continuing fall which commenced in 1887. On the other hand, the exports from Karáchi have increased. The reasons are climatic; a bad wheat season in the Central Provinces on the one hand and a good one in the Punjáb on the other.

Trade.

*H.—Cotton Saw-gins in Dhárwár.*

39. Last year (paragraph 28 of report) the number of steam saw-gins was shown at 15; one more has been added. Of the total 3 are fitted with rollers and the rest with saws in part or entirely. The oldest gins were established in 1884 at Hubli and Gadag by the Southern Marátha Ginning and Pressing Company. In the next

year Mr. Byrámji Frámji followed the Company with two more gins. The natives of the district have not been slow in following in the wake of these outsiders and have up to date erected 12 steam gin factories. The introduction into the district of the Steam Boilers Inspection Act, which enjoins the employment of second class engineers in charge of portable engines, seems to have checked further progress.

It is satisfactory to find that steam saw-gins necessary for the exotic American variety have at last been established in this district. But the number of hand saw-gins has not decreased. They are convenient to small holders and to those at a distance from the steam gins. Saw-gins have of late years been largely used for ginning indigenous cotton to pass it off as saw-ginned Dhárwár. The result is a fall in the price of Dhárwár-American cotton. The Government establishment at Hubli for the repair of hand saw-gins has not yet been taken over by the District Local Board. The fund to which all owners of hand saw-gins contribute compulsorily (as long as they use the gins) is in a satisfactory condition. The Government debt has been paid off and the assets show Rs. 5,000 cash in hand and Rs. 9,500 outstanding balances.

### *I.—Forecasts.*

40. Earlier submission of the cotton forecast and the introduction of forecasts for the more important oilseeds—sesame, linseed and rapeseed—have been ordered.

The following statement shows the areas under cotton and wheat as shown in the forecasts with the estimated outturn:—

| Province. | Total Acreage. | | | Estimated Out-turn, 1889-90. | |
|---|---|---|---|---|---|
| | 1889-90. | 1888-89. | Average. | Total. | Per Acre. |
| *Cotton.* | | | | Bales.* | Lbs. |
| British districts ... ... ... | 2,872,963 | 2,762,294 | 2,615,930 | 559,156 | 77·8 |
| Native States ... ... ... | 2,873,523 | 2,620,482 | 2,639,243 | 768,403 | 106·9 |
| Total ... | 5,746,486 | 5,382,776 | 5,255,173 | 1,327,559 | 92·4 |
| *Wheat.* | | | | Tons. | |
| British districts ... ... ... | 2,322,993 | 2,362,004 | 2,301,828 | 582,482 | 561·6 |
| Native States ... ... ... | 551,017 | 633,887 | 631,547 | 249,695 | 1,015 |
| Total ... | 2,874,010 | 2,995,891 | 2,933,375 | 832,177 | 648·5 |

*In accordance with the recent Government Resolution a bale is here taken equal to 400 lbs.

The area estimated in the forecasts for British districts differs from that reported in the agricultural returns by only about 1·48 per cent. for cotton and 0·49 per cent. for wheat, which is very satisfactory. It is not so easy to test the accuracy of the estimated yield which at best is very approximate.

### *J.—Agricultural and Cattle Shows.*

41. Horse shows are included under this head under the general orders of Government. The reports of such shows are commented upon by the Director of Land Records and Agriculture. The principal shows of the year were :—

| No. | Province. | Place. | Kind of Show. | Date. | Prize Money. | Contributions. |
|---|---|---|---|---|---|---|
| 1 | Deccan ... | Poona ... | Horse-show ... | 24th September. | Rs. 2,887 | Government grant, Rs. 2,000; private subscription, Rs. 1639. |
| 2 | Káthiáwár ... | Rájkot ... | Horse-show ... | 9th December. | Rs. 2,395 and 42 diplomas. | Káthiáwár Chiefs, Rs. 2,000; Local Funds, Rs. 750; Government grant, Rs. 600. |
| 3 | Gujarát... ... | Pálanpur ... | Horse, cattle and agricultural show and exhibition. | 17th December. | Rs. 1,628 | Native Chiefs, Rs. 4,511. |
| 4 | Sind ... ... | Shikárpur .. | Horse and European vegetable show. | 13th January... | Rs. 4,230 | Government grant, Rs. 2,000. |
| 5 | S. M. Country... | Chinchli ... | Horse, cattle and agricultural show. | 6th February. | Rs. 4,897 | Kolhápur Darbár, Rs. 2,000; Chiefs of Miraj Junior and Rámdurg, Rs. 1,000 each; other States, Rs. 4,055. |
| 6 | Gujarát... ... | Ahmadabad... | Horse-show ... | 24th March ... | Rs. 2,270 | Government grant, Rs. 2,000; H. H. The Gáekwár, Rs. 1,000; Ahmadabad Local Board, Rs. 1,000; and others 319. |

*Poona Horse Show.*—The Government grant was reduced from Rs. 3,000 to Rs. 2,000. The season was unfavourable, and the exhibits were few and inferior. Several prizes were withheld. In the Breeders' classes the number was only 233, or less than $\frac{2}{3}$rds that of the previous year.

*Rájkot Metropolitan Horse Show.*—Cattle were not admitted. The show was successful owing greatly to the abolition of local shows in the province. His Excellency the Governor was present. The total number of entries rose from 355 to 610, of which more than half belonged to Girásiás and cultivators, the Chiefs wisely preferring to encourage their subjects. Of 8 entries in the remount class 2 were purchased. In all 16 horses changed hands. The brood mares numbered 139, *i. e.*, $2\frac{1}{2}$ times the total of the last show. There was a good increase in every class. 100 prizes (value Rs. 2,025) and in addition Rs. 370 for silver medals were awarded. Diplomas were given to Chiefs and officers. 225 copies of Mr. Steel's pamphlet on cattle-disease were distributed. The opinion of the Show Committee was expressed that thorough-bred English sires were proved by the exhibits at the show to be more suitable to Káthiáwár than Norfolk Trotters.

*Pálanpur Agricultural Show and Exhibition*—Organized by Colonel Nutt. There were 294 horse entries. The cattle were numerous (492) and were worthy representatives of the fine local breeds. The cream separator and a hay-press were worked at the show. Articles of local manufacture (including jail manufactures) were exhibited. The number of visitors to the show was computed to be about 25,000. The value of the prizes awarded was Rs. 1,628.

*Sind Horse Show.*—The exhibits were 294 less than in the previous year, a result due to wise selection by the classing committee, ensuring superiority in the animals admitted to compete. The remount class was very good indeed and contained many animals suitable as remounts for the army and the police. The gelding class was good. But the paucity of exhibits of animals, the produce of Government stallions, proved the necessity of extension of the nursery system, in imitation of the beginning made at Ahmadnagar. Mule-breeding showed a small but steady progress. 167 remounts—143 for the army and 24 for the police—were purchased at an average of Rs. 250. Similarly 19 mules were secured for Government at Rs. 123—a low figure. The prospects of the show are excellent. Rs. 4,230 were given away in prizes. The Upper Sind Frontier District alone secured Rs. 1,590. Translations of Mr. Sutherland's memorandum on mule-breeding were distributed gratis. Colonel Mayhew, Collector of Shikárpur, organized a show for European vegetables. Rs. 238 were given in prizes. The Collector has for several years encouraged trials with European vegetable seeds and with continued success. The Sind show was very largely attended.

| *Districts.* | |
|---|---|
| Shikárpur with Khairpur ... | 288 |
| Upper Sind ... ... ... | 280 |
| Beluchistán ... ... ... | 157 |
| Áfghánistán ... ... ... | 39 |
| Punjáb, &c. ... ... ... | 20 |
| | 784 |

*Kolhápur and Southern Marátha Country Horse and Cattle Show.*—The show is timed to fit in with a long established Fair. In 1885 the number of horses entered for the show was 382. It is now 1,881, and they are reported remark-

ably free from unsoundness and above ordinary show standard. Large purchases were made from young stock by Captain Webb for the Ahmadnagar Nursery. As to cattle, though numbers were slightly less, the quality was high. Exhibits of agricultural produce appeared to have been hand-picked for the show. Steps should be taken to remedy this defect. A class for agricultural implements and machinery was newly introduced, but it did not fill.

Prizes amounting to Rs. 1,570 were taken by exhibitors from British districts, and Rs. 3,327 by those belonging to the States supporting the show. 130 horses and 2,166 cattle valued at Rs. 46,000 changed hands at the Fair.

*Ahmedabad Horse Show.*—This show was not successful. The bad season of 1888 showed its effect on the condition of the animals and no doubt the Bombay show tempted the best animals. The number of exhibits compared with the previous year shows little change. The large decrease in the remount class was counterbalanced by increases in the classes of brood mares, colts and fillies. The remount class was fairly good. 12 remounts were purchased. Prizes amounting to Rs. 750 were withheld, with promises that they would be given at the next show if improvement takes place. It is, however, satisfactory that in spite of the Bombay show the number of exhibits did not fall off.

| District or State. | 1889. | 1890. |
|---|---|---|
| Ahmedabad ... | 280 | 286 |
| Kaira ... ... | 78 | 71 |
| Baroda ... ... | 159 | 183 |
| Mahi Kántha ... | 63 | 44 |
| Káthiáwár... ... | 6 | 20 |
| Other places ... | 48 | 33 |
| Total ... | 634 | 637 |

*The Bombay Show.*—The great show held in *Bombay* on the occasion of the visit of His Royal Highness Prince Albert Victor was the special feature of the year. No details are at hand to enable me to comment.

Mr. Steel, Principal of the Veterinary College, secured a large number of most interesting photos of horses and cattle representing nearly all the breeds of the Presidency and excellent specimens of nearly all. Mr. Steel is about to publish an album of the photographs with descriptive notes, which will be one of the most valuable publications of the decade.

*Nadiád Show of Agricultural Produce and Cattle.*—His Excellency the Governor was present. The Secretary has not favoured me with statistics of the show, but from personal observation I can attest to the excellence of the show except in cattle, of which the exhibits were neither as numerous nor as good as they ought to have been.

## VI.—CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

### *Veterinary Dispensaries.*

42. The object in view is to follow with respect to animals the methods of popularizing scientific treatment of disease which have been successful in the case of human beings. The Bombay Veterinary College graduates have been utilized as Assistant Veterinarians in charge of dispensaries furnished with a few sick stables for in-patients. The dispensaries are assisted by a grant-in-aid from Government under the conditions noted in paragraph 43 of last year's report. Though no addition to the number of the dispensaries has been made during the year, the successful working of the four previously established in Ahmedabad, Nadiád, Násik and Dhulia will undoubtedly induce the Local Boards and other bodies interested in the care of cattle in disease, such as the Managers of Pinjrápols, and of Associations for the Prevention of Cruelty to Animals, to accept the offer of Government open to all.

A short notice of the working of each of the dispensaries may be given:—

*Ahmedabad.*—The Government grant (Rs. 400) is supplemented by grants from the Municipality (Rs. 200), Pinjrápol (Rs. 300), Local Board (Rs. 200). Private subscriptions amounted to Rs. 220. A small balance remained at the end of the year. Instruments and medicines have been purchased. The dispensary has been furnished. Sick stables for animals have been provided, and a compounder or assistant on Rs. 10 employed. 22 in-patients, 554 out-patients, and 69 Pinjrápol patients have been tended. The Assistant Veterinarian visited 25 villages in the neighbourhood where foot and mouth disease was raging. He has given lectures.

His work has been satisfactory and he has succeeded in winning confidence. If even Pinjrápols could, by the work of the Assistant Veterinarian, be

converted into refuges for animals, conspicuous for attention to and care of diseases and injuries, as well as for providing a mere means of subsistence, these well intentioned charities would be charities in reality.

*Nadiád.*—Government grant (Rs. 400), Municipality (Rs. 150), Local Board (Rs. 500). The Municipality also gave an initial donation of Rs. 150. The funds were all expended in equipment and pay of the establishment, including the compounder. 667 patients were tended, of which 128 were brought from outside villages. There are apparently no arrangements for in-patients; but the Assistant Veterinarian halted for three weeks at Mehmadabad and Ánand, and treated five patients. The Collector rightly thinks that the Assistant should not attempt to make his dispensary peripatetic. The Pinjrápol at Nadiád has so far, it would seem, neither availed itself of the services of the dispensary nor contributed to its support. The Assistant Veterinarian wisely visited several villages, before his medicines arrived, to study cattle-disease and to acquaint the villagers with his mission.

*Násik.*—The dispensary has been incorporated with an established depôt of the Society for the Prevention of Cruelty to Animals. The grants were as follows :—Government Rs. 400, Municipality and Local Funds Rs. 200 each, donations and subscriptions Rs. 845. The charges were similar to those of other dispensaries and were covered by the receipts. Three prosecutions for ill-treatment of animals were instituted in the year as against 11 in the 14 months previous. In all 186 animals were treated as in-patients. Of these, 38 were sent by members of the Society, and 19 by the Pinjrápol. 14 were sent by the police and municipality. The rest by their owners.

There were, in addition, 89 out-patients. Fees are received for feeding animals in hospital, but animals belonging to poor owners were fed at the cost of the Society.

*Dhulia.*—Opened in December only, but the report gives a history up to the end of July. There is provision for 12 in-patients. 239 out-patients and 9 in-patients were treated. During the nine months ending 31st July the receipts amounted to Rs. 2,950 and expenditure to Rs. 1,287. In April the Assistant Veterinarian toured in the Páchora Táluka where rinderpest was prevalent, and assisted the Superintendent of the Government Farm at Bhadgaon where the epidemic was most severe. The dispensary was closed during the tour.

All the dispensaries have framed rules.

*Bacteriological Laboratory.*

43. Dr. Lingard has assumed charge of the Bacteriological Laboratory located near the College of Science at Poona (*vide* paragraph 44 of last report), and the work of the laboratory has been commenced.

*Civil Veterinary Department.*

44. The sanction of Government to the organization of the department has been received. The Department, which will include the Horse-breeding Department, will be under the Director, Land Records and Agriculture. Detailed proposals under the sanction are in course of submission.

*Cattle-Disease.*

45. The year is characterized by an absence of reports of epidemics among cattle. But information received from other sources than the reports published in the *Government Gazette* show that there was rinderpest in Khándesh, Thána and Kaira. The prompt report by local officers of cattle epidemics is greatly desirable.

On the Bhadgaon Farm a severe attack of rinderpest occurred in April 1890. Of 113 animals attacked 54 died. The Superintendent observes that rinderpest is only known to the Vanjáris. Good results were obtained by keeping up the strength of the animals attacked with arrowroot *kánji.* Soon after the disappearance of rinderpest foot and mouth disease broke out on the farm. No casualties occurred, but in this disease the value of ensilage and arrowroot *kánji* was marked.

Cattle-disease was also reported from the Bassein Táluka of the Thána District. From the symptoms described by the village officers, the disease appears to have been rinderpest. It occurred about the end of November, and

attacked 406 head of cattle, of which 223 died. It lasted only for a fortnight. The rayats are reported to have taken no steps towards segregation. Both sick and unaffected animals were driven together as usual to pasturage.

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

### A.—AGRICULTURAL.

46. The only important change made in the standing orders during the year is with reference to the anna estimates of the outturn of crops, which will be explained further on (paragraph 60).

The district returns again show some improvement in compilation but not in punctuality, the returns from many districts having been late; while in the case of the districts noted in the margin, they were more than a month over-due. Besides this, the returns from some districts of Sind were so incomplete and faulty that amended returns had to be asked, which were not received until the other sections of my annual report had already gone to press. The general compilation of the Presidency Returns was thus delayed, both for my annual report and for the General Administration Report.

| | *Date of receipt.* |
|---|---|
| Broach .. .. | 3rd October . |
| Karáchi .. .. | 6th do. .. |
| Hyderabad .. | 6th do. .. |
| Shikárpur .. .. | 7th do. .. |
| Thána .. .. | 13th do. .. |
| Thar and Párkar .. | 20th do. .. |

**Return No. I—Area of Available Statistics.**

47. Gross Area.—The gross area of the Presidency Proper shows an increase of 44 villages and 55,000 acres under 'Government', but a decrease of 57 villages and 2,400 acres under 'Alienated'. In Government villages, Kánara gives an increase of 43 villages in consequence of the recognition of hamlets as villages; while in Panch Maháls one village lapsing was transferred from the head 'Alienated' to 'Government'. In alienated villages Panch Maháls returns 60 villages less, and Sátára 3 villages more. In the former district the record of the 59 villages of the Nárukot State has been separated from the district record, and one alienated village lapsed to Government, while, in the latter district, 3 villages which belong to Native States are now for the first time included in the returns, because they contain land belonging to Government.

The chief variations in the gross area of the districts are noted in the marginal table. The variations in Panch Maháls are already explained. In Khándesh the correct area is not yet known; in the *outbandi* villages it varies according to the extent of cultivation which only is recorded. In Kánara the large increase is due to the completion of the survey. The gross area of the district has now been correctly ascertained and returned at 2,519,930 instead of 2,435,436 acres hitherto estimated. In other districts the variations are due to the progress of the survey, to transfers made from 'Alienated' to 'Government' and to rectifications of errors. In Sind, the survey being still incomplete, the gross area is still an estimate; that reported shows an increase of 236,000 acres.

| | Govenment. | Alienated. |
|---|---|---|
| | Acres. | Acres. |
| Ahmedabad ... .. | −853 | ..... |
| Panch Maháls .. | +1,700 | −1,735 |
| Khándesh .. .. | −22,562 | −839 |
| Ahmadnagar .. | −3,975 | −270 |
| Poona .. .. | −8,012 | −5,074 |
| Sátára .. .. | +3,918 | −829 |
| Thána .. .. | −648 | +5,032 |
| Kánara .. .. | +84,494 | .... |

48. Area of available statistics.—In the Presidency Proper fluctuations in the number of villages and in the areas returning figures are noted in the margin. In Khándesh 19 *outbandi* villages were last year wrongly entered under the head 'Available' and 3 villages lay waste during the year. These are transferred to the head 'Not available.' In Kánara the large increase is due, as noticed above, to the progress of the survey. 81 villages are still returned under the head 'Not available', for which statistics will be available in future. In other districts the variations have arisen from the causes which have been stated with reference to the gross area.

| | Villages. | Area. |
|---|---|---|
| | | (Acres.) |
| Panch Maháls .. | +1 | +1,700 |
| Khándesh .. .. | −22 | −16,407 |
| Poona .. .. | +1 | −4,975 |
| Sátára .. .. | +4 | +6,218 |
| Kánara .. .. | +66 | +82,609 |

In Sind the area of available statistics has increased by 6,706,000 acres. The large increase in area is, however, nominal, being chiefly due to the inclusion of the extensive unsurveyed waste in the 14 villages of Thar and Párkar. In Karáchi, on the other hand, 62 villages which were wrongly included last year, are excluded this year, as they are unsurveyed villages. The revised manual has been in force in Sind for two years, but the classification of villages for the return under consideration does not appear to have been correctly observed. The large increase in area is thus greatly due to misapprehension.

| | Non-reporting Government Villages. |
|---|---|
| Kaira .. .. .. | 36 |
| Panch Mahále .. | 59 |
| Khándesh .. .. | 358½ |
| Násik .. . | 12 |
| Poona.. .. .. | 3 |
| Thána .. .. | 14 |
| Kolába .. .. | 2 |
| Ratnágiri .. .. | 278 |
| Kánara .. .. | 81 |
| Total .. | 843½ |

In the Presidency Proper statistics are not available for 843½ Government and 803 alienated villages with a total area of 2,373,000 acres, or 5 per cent. of the gross area. The alienated villages are all unsurveyed. The non-reporting Government villages, except in Kánara, are held under various tenures which preclude the possibility as yet of obtaining fairly correct statistics.

In Sind statistics are returned for all but 161 villages with an area of 1,844,000 acres.

**Return No. II.—Cultivated and Uncultivated Area.**

49. The following table summarizes the information contained in Returns Nos. I and II:—

| No. | District. | Percentage on gross area, of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas. Cultivated. Actually cropped. | Cultivated. Current Fallows. | Uncultivated. Available for cultivation. | Uncultivated. Not available for cultivation. | Forest. |
|---|---|---|---|---|---|---|---|
| | A.—Presidency proper. | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 1·0 | 55 | 22 | 4 | 18 | 1 |
| 2 | Kaira ... ... ... | 8·5 | 75 | 5 | 8 | 12 | ... |
| 3 | Panch Mahále ... ... | 15·5 | 35 | 13 | 30 | 9 | 13 |
| 4 | Broach ... ... ... | 1·9 | 65 | 5 | 3 | 27 | ... |
| 5 | Surat ... ... ... | 2·4 | 47 | 25 | 7 | 17 | 4 |
| | Average ... | 4·8 | 55 | 16 | 9 | 17 | 3 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 9·8 | 58 | 4 | 17 | 12 | 9 |
| 7 | Násik ... ... ... | 4·2 | 55 | 10 | 5 | 9 | 21 |
| 8 | Ahmadnagar ... ... | 2·5 | 66 | 8 | 2 | 10 | 14 |
| 9 | Poona ... ... ... | 1·2 | 62 | 11 | 1 | 14 | 12 |
| 10 | Sholápur ... ... | ... | 74 | 11 | 1 | 8 | 6 |
| 11 | Sátára ... ... ... | 4·1 | 60 | 13 | 2 | 10 | 15 |
| | Average ... | 4·3 | 62 | 9 | 6 | 11 | 12 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 0·9 | 62 | 11 | 5 | 7 | 15 |
| 13 | Bijápur ... ... ... | 0·7 | 76 | 9 | 4 | 6 | 5 |
| 14 | Dhárwár ... ... | 2·5 | 71 | 9 | 3 | 7 | 10 |
| | Average ... | 1·4 | 70 | 10 | 4 | 7 | 9 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 4·1 | 22 | 21 | 6 | 32 | 19 |
| 16 | Kolába ... ... ... | 2·4 | 30 | 23 | 4 | 24 | 19 |
| 17 | Ratnágiri ... ... | 28·7 | 27 | 43 | 1 | 28 | 1 |
| 18 | Kánara ... ... ... | 3·3 | 10 | 3 | 3 | 8 | 76 |
| | Average ... | 10·7 | 20 | 21 | 3 | 23 | 33 |
| | Average A. ... | 4·9 | 56 | 12 | 5 | 13 | 14 |
| | B.—Sind. | | | | | | |
| 19 | Karáchi ... ... ... | 2·7 | 8 | 8 | 13 | 69 | 2 |
| 20 | Hyderabad ... ... | ... | 15 | 23 | 34 | 27 | 1 |
| 21 | Shikárpur ... ... | 17·6 | 21 | 15 | 39 | 18 | 7 |
| 22 | Upper Sind Frontier ... | 48·9 | 22 | 42 | 17 | 13 | 6 |
| 23 | Thar and Párkar ... | ... | 8 | 7 | ... | 85 | ... |
| | Average B. ... | 7·0 | 12 | 14 | 18 | 54 | 2 |
| | Average for the Presidency ... ... | 5·7 | 40 | 13 | 10 | 27 | 10 |

Comparing the first percentage column of this table with that of the year 1885-86, it may be noticed that in the Presidency (excluding Sind) the area of non-available statistics has decreased from 9 to 5 per cent. On the whole this decrease indicates improved classification but also to some extent arises from progress of the survey. Ratnágiri has gradually been able to send in statistics, approximate though they be, for ¾ths of its area. In Kánara the improvement from 14 to 3 per cent. is real. In Panch Maháls and Khándesh, it is only in part a real improvement. In other districts where there is an apparent retrogression, the decreased area of available statistics points rather to more discrimination in classification.

The figures for Sind will not be again commented upon, for as yet they are not sufficiently trustworthy to justify comparison with those of previous years.

In the Presidency Proper the cultivated land gives an increase of 2 per cent. in the area actually cropped but a decrease of 1 per cent. under current fallow, if compared with the percentages of last year. The increase is general, and though partly due to corresponding decrease in fallow, is also attributable to occupation of unoccupied waste, as will be explained. The "Uncultivated area" exhibits a decrease of 3 per cent. under the sub-head "Available for cultivation," a decrease mostly confined to Kánara and caused by corresponding transfer to "Forest."

Gross cropped area.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... ... | +144 |
| Násik ... ... ... | +116 |
| Khándesh ... ... | +101 |
| Panch Maháls ... ... | +89 |
| Bijápur ... ... ... | +69 |
| Surat ... ... ... | +62 |

50. The gross cropped area (excluding Sind) shows an increase of 6½ lákhs acres, or 2·6 per cent. The increase is general, but especially large in the districts noted in the margin. It is chiefly due to favourable sowing rains both in the kharíf and rabi seasons. A few districts, however, report decrease—Ahmadabad (35,000 acres), Dhárwár (6,000) and Kolába (26,000). In the two former the falling off is accounted for by decrease in the twice-cropped area, and in Kolába by larger fallow.

Twice-cropped area.

| | Thousand Acres. |
|---|---|
| Ahmadabad ... ... | —50 |
| Kaira ... ... ... | —8 |
| Panch Maháls ... ... | +63 |
| Surat ... ... ... | +15 |
| Dhárwár ... ... ... | —10 |
| Násik ... ... ... | —6 |
| Sátára ... ... ... | +6 |

51. The twice-cropped area shows an increase of 53,000 acres, or 10 per cent. This area, except in garden lands, depends on the moisture available from the late rains. The variations are most striking in Gujarát, where the last year's deficit in the Panch Maháls and Surat appears to have been made up, while in Ahmadabad the unusual increase of last year has disappeared. In other districts the variations are small and require no detailed notice.

Cultivated area.

52. The cultivated area, *i.e.*, occupied including fallow plus unoccupied but temporarily cultivated land, *e. g.*, river-beds and the like, gives an increase of 184,000 acres, or 0·6 per cent. The increase is specially large in Bijápur (35,000 acres), Panch Maháls (33,000) and Thána (31,000), and is due to the taking up of waste land for cultivation. In Bijápur the increase is confined to the northern tálukas where land was extensively thrown up during the famine of 1876-77, which is steadily being re-occupied under the influence of favourable seasons and railway extension. Other districts also show a small but general increase in the cultivated area. On the other hand, in Surat there is a decrease of 1,500 acres and in Kolába of 1,000 acres. In the former the Collector attributes the decrease chiefly "to land having been attached (? resumed) by Government for arrears of revenue," while in the latter the explanation furnished is not relevant.

Net cropped area and fallow.

| District. | Net cropped. | Current Fallow. |
|---|---|---|
| | Thousand Acres. | |
| Ahmadabad ... | +15 | —13 |
| Kaira ... ... | +18 | —17 |
| Panch Maháls ... | +26 | +6 |
| Broach ... ... | +26 | —26 |
| Surat ... ... | +17 | —18 |
| Khándesh ... | +101 | —86 |
| Násik ... ... | +122 | —111 |
| Ahmadnagar ... | +142 | —131 |
| Sholápur ... ... | +22 | —20 |
| Bijápur ... ... | +69 | —33 |
| Kolába ... ... | —28 | +27 |

53. Contrary to last year, there is a general increase except in Kolába in the net cropped area (597,000 acres) with a decrease in current fallow (413,000 acres), a result due to a more favourable season. The chief variations are marginally shown. The exceptional decrease in Kolába must be due to rotation only, for the sowing rain was here as favourable as in other districts. In Panch Maháls the increase both under net cropped area and current fallow is due to the large area of waste taken up for cultivation, indicating progress in this backward district.

54. The decrease in assessed land available for cultivation (106,000 acres) indicates the gain in occupied, *i. e.*, revenue-paying area. The decrease in unassessed land available for cultivation of 879,000 acres,.or 49·8 per cent., is principally due to the transfer of the area returned under this head to " Forest ".

Uncultivated area.

55. The forest area shows an increase of 977,000 acres,or 18 per cent. The chief variations are noted in the margin and are chiefly observable in Kánara. In Kánara, the increase is all due to the transfer to this head of the land hitherto shown under the head "Available for cultivation." In other districts the increase is probably due to more land brought under forest settlement. The decrease in Khándesh is attributed to the transfer of certain forest villages from the villages of available statistics to villages for which statistics are not available. These increases prove improvement, for, in one sense the area under forest may be looked on as, to some extent, a reserve fund for future extension of cultivation.

Forest.

| | Thousand Acres. |
|---|---|
| Kánara ... ... ... ... | +937 |
| Thána ... ... ... ... | +40 |
| Khándesh... ... ... ... | −14 |
| Poona ... ... ... ... | +11 |
| Sholápur ... ... ... ... | +3 |
| Sátára ... ... ... ... | −2 |

The Collectors of Kánara, Dhárwár, Belgaum and Shikárpur have made enquiries with a view to reconcile the discrepancies in the forest area returned by the Forest and the Revenue Departments respectively. But it is certain that so long as the returns of the Forest Department are prepared on the basis of the Government Notification issued in 1878, the discrepancies will continue until the forest demarcation and settlement are completed and until the requirements of Village Form IA (Government Resolutions Nos. 2952 and 3614, dated 30th April and 26th May 1890) are complied with.

In some districts, it seems probable that the discrepancies are due to the inclusion, in the area returned as forest by the Forest Department, of land in villages which are entirely excluded from the agricultural returns because they cannot provide the requisite statistics of cultivation.

**Return No. III.—Crops.**

56. The rainfall was on the whole more favourable for sowing than last year, the total area under crops in the Presidency Proper having risen by 6½ lákhs acres, or 2·6 per cent. Bájri and paddy among cereals, tur and other pulses except gram, tobacco, oil-seeds and cotton give a general increase, while jowári, especially the rabi variety, wheat, gram and sugar-cane show a considerable decrease. The increase is specially noticeable in the kharíf area, the early rain being decidedly favourable in the Deccan and Karnátak. But the late rains were generally deficient for the rabi sowing of wheat and gram in many parts. Food and non-food crops show an increase of 2 and 5 per cent. respectively.

57. The following table shows at a glance the effect of the season as far as the area sown is concerned :—

PRESIDENCY PROPER.

| Crops. | 1888-89. | 1889-90. | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|
| | Thousand Acres. | Thousand Acres. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| Jowári ... ... ... ... | 8,510 | 7,698 | ... | ... | 812 | 9·5 |
| Bájri ... ... ... ... | 3,845 | 4,959 | 1,114 | 29·0 | ... | ... |
| Paddy ... ... ... ... | 1,605 | 1,704 | 99 | 6·1 | ... | ... |
| Wheat ... ... ... ... | 2,078 | 1,924 | ... | ... | 154 | 7·4 |
| Others ... ... ... ... | 2,012 | 1,981 | ... | ... | 31 | 1·5 |
| Total Cereals .. | 18,050 | 18,266 | 216 | 1·2 | ... | ... |
| Tur ... ... ... ... | 508 | 603 | 95 | 18·7 | ... | ... |
| Gram ... ... ... ... | 731 | 691 | ... | ... | 40 | 5·5 |
| Others ... ... ... ... | 1,035 | 1,186 | 151 | 14·6 | ... | ... |
| Total Pulses ... | 2,274 | 2,480 | 206 | 9·0 | ... | ... |
| Tobacco... ... ... ... | 49 | 70 | 21 | 42·8 | ... | ... |
| Sugarcane ... ... ... | 89 | 68 | ... | ... | 21 | 23·6 |
| Oil-seeds ... ... ... | 1,482 | 1,533 | 51 | 3·4 | ... | ... |
| Cotton... ... ... ... | 2,665 | 2,816 | 151 | 5·6 | ... | ... |
| Food Crops Total ... | 20,593 | 21,003 | 410 | 1·9 | ... | ... |
| Non-food Crops Total ... | 4,472 | 4,713 | 241 | 5·4 | ... | ... |
| Grand Total ... | 25,065 | 25,716 | 651 | 2·6 | ... | ... |

**Jowári.**—Rabi jowári has decreased by $10\frac{1}{3}$ lákhs acres, while the kharíf variety shows an increase of $2\frac{1}{4}$ lákhs. The net decrease of 8 lákhs acres, or 9·5 per cent., is general, for the favourable early rain in the Deccan and Karnátak encouraged a preference for bájri except in Khándesh, Belgaum and Poona. In parts of Khándesh bájri is not a favourite kharíf cereal. The decrease in some parts, as in Broach, is also partly due to rotation. The net decrease in jowári is more than counterbalanced by the increase of over 11 lákhs in bájri.

| | Thousand Acres. | |
|---|---|---|
| | Kharíf. | Rábi. |
| Ahmadnagar .. .. | .. | −419 |
| Sholápur .. .. | .. | −199 |
| Sátára .. .. .. | +47 | −150 |
| Bijápur .. .. .. | −6 | −92 |
| Broach . .. .. | −5 | −34 |
| Násik .. .. .. | +72 | −101 |
| Surat .. .. .. | −5 | −5 |
| Dhárwár .. .. | −44 | +35 |
| Poona .. .. .. | +107 | −80 |
| Ahmadabad .. .. | +15 | .. |
| Belgaum .. .. | +8 | +7 |

**Bájri.**—The increase of 11 lákhs, or 29 per cent., is general except in Poona and parts of Gujarát, and especially large in the north and east Deccan.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... ... ... | +544 |
| Násik ... ... ... ... | +182 |
| Sholápur ... ... ... ... | +134 |
| Khándesh ... ... ... | +119 |
| Sátára ... ... ... ... | +90 |
| Bijápur ... ... ... ... | +88 |
| Ahmadabad ... ... ... | +9 |
| Poona ... ... ... ... | −35 |
| Kaira ... ... ... ... | −22 |

In Poona the early favourable rains appear to have been taken advantage of in sowing the kharíf jowári rather than bájri as in other districts. In Gujarát, Ahmadabad alone shows increase; other districts give a small decrease.

| | Thousand Acres. |
|---|---|
| Ahmadabad .. .. .. | +37 |
| Kaira .. .. .. .. | +35 |
| Surat .. .. .. .. | +7 |
| Broach .. .. .. .. | +3 |
| Panch Mahále .. .. .. | +2 |

**Paddy.**—The increase of 1 lákh, or 6·1 per cent., is chiefly confined to Gujarát, where the deficit of last year appears to have been made up to a great extent by the favourable sowing rain. In other districts, the variations are small, and on the whole show a small increase.

**Wheat.**—The decrease of $1\frac{1}{2}$ lákhs, or 7·4 per cent., is specially large in the north Deccan, north Gujarát and Bijápur, while south Gujarát gives a considerable increase.

Dry-crop wheat depends largely on the seasonableness or otherwise of the late rains. In dry districts of the Deccan especially many soils grow bájri if the early rains are good, but are kept for rabi wheat or gram, if the kharíf sowing season is unfavourable or of short duration. This partly explains the decreased area of the current year under wheat. The late rains were very scant in Khándesh and north Gujarát, while in south Gujarát the deficiency in last year's area is partly made up. In the Karnátak, Dhárwár and Belgaum give a small increase, but in Bijápur the area fell by 11·1 per cent., owing to rotation and to more extended kharíf sowings. There is no evidence that the wheat area has been influenced by the export demand for wheat. Rather may it be said that the area under wheat influences the export trade.

| | Thousand Acres. |
|---|---|
| *Decrease.* | |
| Khándesh ... ... ... | −114 |
| Ahmadnagar ... ... ... | −39 |
| Násik ... ... ... ... | −37 |
| Bijápur ... ... ... ... | −23 |
| Ahmadabad ... ... ... | −14 |
| Kaira ... ... ... ... | −13 |
| *Increase.* | |
| Broach ... ... ... ... | +40 |
| Panch Mahále ... ... ... | +16 |
| Surat ... ... ... ... | +12 |
| Sholápur ... ... ... ... | +8 |
| Dhárwár ... ... ... ... | +6 |
| Poona ... ... ... .. | +3 |
| Sátára ... ... ... ... | +3 |

**Other cereals.**—The minor cereals show on the whole a decrease of 31 thousand acres, or 1·5 per cent. Where grown they form the principal food of the poorer classes. Rála is almost all grown in the Karnátak and south Deccan, Under kodra, Surat and Kolába give a large decrease of 12 and 8 thousand acres respectively; while other districts of Gujarát give a considerable increase.

| | Thousand Acres. |
|---|---|
| Kodra ... ... ... ... | −8 |
| Rági ... ... ... ... | −17 |
| Rála ... ... ... ... | +2 |
| Vari ... ... ... ... | +12 |

Under rági a decrease is noticeable in Ratnágiri (10,000 acres), Ahmadabad (6,000 acres), Kaira and Kolába (5,000 acres each); while Poona gives an increase of 5,000 acres, and Sátára and Thána of 3,000 acres each. There is a large increase under rála, which is chiefly confined to Dhárwár (9,000 acres) and Bijápur (3,000 acres). Belgaum and Sátára on the other hand show a decrease of 9 and 1 thousand acres respectively. Under vari, Ahmadabad in Gujarát, Násik and Sátára in the Deccan, Belgaum in the Karnátak and Ratnágiri in the Konkan give a large increase, while Kolába shows a decrease. In Panch Mahále, where it is a staple crop, maize occupied 87,000 acres, a decrease of 4·4 per cent.

**Barley.**—The area under barley shows a large decrease of 19,000 acres, or about 34·4 per cent. The decrease is most conspicuous in Gujarát, where, owing to the insufficiency of late rains, the rabi area was generally short. The crop is cultivated chiefly in the districts noted in the margin.

| | 1888-89. | 1889-90. |
|---|---|---|
| | Acres. | Acres. |
| Ahmadabad ... | 34,100 | 19,600 |
| Kaira ... ... | 10,700 | 6,500 |
| Panch Maháls ... | 230 | 1,360 |
| Poona ... ... | 2,200 | 1,200 |
| Sholápur ... ... | 1,200 | 1,400 |
| Sátára ... ... | 5,700 | 5,200 |

**Pulses.**—There is a general increase of 2 lákhs, or 9 per cent. under pulses. Pulses are largely sown mixed with bájri and jowári. The figures shown in para. 58 indicate that nearly two-thirds of the pulses are grown in the kharíf season. The increase may therefore be attributed to the favourable early rains in the Deccan and Karnátak. Tur shows a general increase except in Poona and Dhárwár and gram, a rabi pulse, a general decrease except in a few districts and especially in Panch Maháls, where the deficiency of last year was more than made up by the exceptionally favourable showers from late rains. The decrease in gram elsewhere is attributed to the deficiency of late rains, as in the case of wheat.

| | Thousand Acres. |
|---|---|
| *Tur.* | |
| Ahmadnagar ... ... ... | +21 |
| Bijápur ... ... ... ... | +21 |
| Sholápur... ... ... ... | +20 |
| Sátára ... ... ... ... | +10 |
| *Gram.* | |
| Ahmadnagar ... ... ... | —29 |
| Ahmadabad ... ... ... | —26 |
| Násik ... ... ... ... | —17 |
| Khándesh ... ... ... | —13 |
| Panch Maháls ... ... ... | +46 |

**Tobacco.**—Contray to last year, an increase of 21,000 acres, or 42·8 per cent., is observed in all districts, except Sátára, and is especially large in the districts noted in the margin. The increase is attributed to seasonable rainfall and in some places to high prices of last year. In Sátára alone, there is a small decrease of 200 acres. It may be noticed that this crop is only an extensive field-crop in Kaira and in one táluka (Chikodi) of Belgaum. Elsewhere it is chiefly grown in small plots solely for local consumption.

| | Acres. |
|---|---|
| Belgaum ... ... ... ... | +6,600 |
| Káira ... ... ... ... | +6,000 |
| Sholápur ... ... ... ... | +1,900 |
| Ahmadnagar ... ... ... | +1,400 |
| Broach ... ... ... ... | +1,300 |
| Khándesh ... ... ... | +1,100 |
| Ahmadabad ... ... ... | +700 |
| Panch Maháls ... ... ... | +600 |
| Bijápur ... ... ... ... | +500 |

**Sugarcane.**—The decrease of 21,000 acres, or 23·6 per cent., is noticeable in all districts, except that Dhárwár gives an inappreciable increase of 77 acres. The decrease is generally attributed partly to exigencies of rotation and partly to low prices of 1888-89, especially in the Deccan and Karnátak, where the prices show a fall varying from 6 annas to Re. 1 per Indian maund. In Poona, the decrease is also no doubt due to the prohibition of sugarcane cultivation within an area of five miles round the Poona city. I think that the low price of gur in the previous year must be taken to be a partial explanation of this decrease. It is a crop requiring capital, and capital with the cultivators depends on previous good seasons. In many parts, especially Gujarát, where cane is largely grown, we have passed long through a cycle of unfavourable seasons. The trade returns also show large importations from Upper India into Gujarát of gur for local demand. Local supply was short and prices rose again very rapidly in 1889-90.

| | Acres. |
|---|---|
| Sátára ... ... ... ... | —4,400 |
| Násik ... ... ... ... | —2,900 |
| Poona ... ... ... ... | —2,800 |
| Ahmadnagar ... ... ... | —2,600 |
| Surat ... ... ... ... | —2,500 |
| Sholápur ... ... ... ... | —1,300 |
| Ahmadabad ... ... ... | —1,100 |
| Kaira ... ... ... ... | —1,100 |
| Belgaum ... ... ... ... | —1,100 |
| Khándesh ... ... ... | —1,100 |

**Oilseeds.**—There is a net increase of 51,000 acres, or 3·4 per cent. Linseed, which is a late crop, gives a considerable decrease, while sesame and others give the increase noted in the margin. Among other oilseeds, kardai or safflower, which is largely grown as a mixed crop in the Deccan and Karnátak, shows a decrease of 20,000 acres, or 3·6 per cent., corresponding to the general fall in wheat and jowári. Nigerseed, a kharíf crop, shows a rise of 53,000 acres, or 23·2 per cent. Castorseed and groundnut give a small increase of 22 and 9 thousand acres respectively.

| | Thousand Acres. |
|---|---|
| Linseed ... ... ... ... | —42 |
| Sesame ... ... ... ... | +32 |
| Others ... ... ... ... | +61 |

Linseed and sesame are important as being the export seeds of Bombay and require special notice.

**Linseed.**—Linseed is always a late crop, chiefly grown in the Deccan and Karnátak. The decrease of 42,000 acres is noticeable in the Deccan, except Sholápur, while the Karnátak exhibits an increase. The decrease is due to deficiency of late rains in the Deccan.

| | Thousand Acres. |
|---|---|
| Khándesh ... ... ... | —42 |
| Násik ... ... ... ... | —7 |
| Sátára ... ... ... ... | —6 |
| Ahmadnagar ... ... ... | —4 |
| Bijápur ... ... ... ... | +7 |
| Sholápur... ... ... ... | +6 |
| Dhárwár ... ... ... ... | +3 |

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... ... ... | +10 |
| Bijápur ... ... ... ... | +9 |
| Panch Mahále ... ... ... | +8 |
| Khándesh ... ... ... | +7 |
| Ratnágiri ... ... ... | +6 |
| Sholápur ... ... ... ... | +4 |
| Poona ... ... ... ... | —15 |
| Kolába ... ... ... ... | —2 |

**Sesame.**—The increase of 32,000 acres, or 12 per cent., is general, except in Poona and Kolába. Sesame is chiefly grown as a kharíf crop, and the increase is due to favourable early rains. The large decrease in Poona is attributed to insufficiency of sowing rain.

**Cotton.**—There is an increase of 1½ lákhs, or 5·6 per cent., *i.e.*, exactly equal to the decrease noticed last year. The increase is general, except that Ahmadabad and Belgaum give a decrease. The increase is due partly to season and partly to rotation. In Ahmadabad where the decrease is considerable, the sowing rain for cotton was again unseasonable as in last year.

| | Thousand Acres. |
|---|---|
| Khándesh ... ... ... | +90 |
| Bijápur ... ... ... ... | +53 |
| Ahmadnagar ... ... ... | +39 |
| Dhárwár ... ... ... ... | +12 |
| Broach ... ... ... ... | +3 |
| Surat ... ... ... ... | +3 |
| Ahmadabad ... ... ... | —45 |
| Belgaum ... ... ... ... | —4 |

**Potato.**—The area shows a decrease from 11,700 to 9,600 acres, or 17·9 per cent. The area and variations are given for the chief districts in the margin. The decrease is general, except in Násik and Dhárwár. The large decrease in Poona is probably due to poor crop of previous year.

| | 1888-89. | 1889-90. |
|---|---|---|
| | Acres. | Acres. |
| Poona ... ... | 9,800 | 8,100 |
| Ahmadnagar ... | 550 | 230 |
| Sátára ... ... | 530 | 370 |
| Násik ... ... | 170 | 300 |
| Ahmadabad ... | 200 | 170 |
| Kaira ... ... | 190 | 110 |
| Dhárwár ... ... | 80 | 150 |

**Green fodder.**—Lucerne occupied 1,139 acres against 659 acres in last year, chiefly in Ahmadnagar (644), Poona (220), Násik (217) and Thána (53). In Ahmadabad 268 acres were last year returned under Guinea grass. But no area has this year been shown under this head. Hot-weather jowári, which is the only cereal largely cultivated for fodder only, shows a decrease from 21 to 17 thousand acres.

58. **Kharif and Rabi crops.**—The details appended in the tables show the variations under kharíf and rabi cereals and pulses as noted below :—

*Thousand Acres.*

| Year. | Kharíf. | | Rabi. | |
|---|---|---|---|---|
| | Cereals. | Pulses. | Cereals. | Pulses. |
| 1888-89 ... ... | 1,02,40 | 14,03 | 78,09 | 8,71 |
| 1889-90 ... ... | 1,15,99 | 15,95 | 66,66 | 8,84 |
| | +13,59 | +1,92 | —11,43 | +13 |

The kharíf crops show, as noticed above, a large increase owing to seasonable early rains, while the rabi crops give a large decrease.

59. The two returns showing the distribution of crops are now to be given as usual. Statement A shows the distribution of the principal crops in each district, including Sind. Statement B shows the proportion which the area under the several crops in each district holds with respect to the gross area in the Presidency Proper.

From these returns it is possible at a glance to see what are the staples of each district and the proportion the area under staples bears to the total area of crops in the district and also in the Presidency. Again, the tables after a series of years will, if collated, indicate the varying proportion between food and non-food crops and the gradual transition under the influence of general progress and of the impetus of local and foreign trade, from the self-sufficing system of cultivation for local needs to the system of farming for profit or trade.

## *A.—Distribution of Crops.—Percentages shown on District Areas.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Presidency Proper. | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 26 | 18 | 4 | 12 | 4 | 2 | 66 | 6 | 1 | 23 | 3 | 1 | 73 | 27 |
| 2 | Kaira ... ... ... ... | 9 | 29 | 16 | 2 | 24 | 1 | 81 | 11 | 1 | 1 | 2 | 4 | 93 | 7 |
| 3 | Panch Mahâls ... ... ... | 2 | 11 | 13 | 5 | 16 | 24 | 71 | 20 | ... | ... | 8 | 1 | 91 | 9 |
| 4 | Broach ... ... ... ... | 22 | 3 | 3 | 9 | 2 | ... | 39 | 10 | 4 | 43 | 3 | 1 | 53 | 47 |
| 5 | Surat ... ... ... ... | 23 | 2 | 19 | 4 | 9 | ... | 57 | 16 | 2 | 17 | 7 | 1 | 75 | 25 |
| | Average ... | 19 | 14 | 10 | 8 | 10 | 3 | 64 | 11 | 1 | 19 | 4 | 1 | 76 | 24 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 19 | 25 | 1 | 7 | 1 | ... | 53 | 7 | ... | 35 | 4 | 1 | 60 | 40 |
| 7 | Násik ... ... ... ... | 7 | 40 | 3 | 17 | 10 | ... | 77 | 10 | 1 | 1 | 10 | 1 | 88 | 12 |
| 8 | Ahmadnagar ... ... ... | 37 | 35 | ... | 9 | 2 | ... | 83 | 8 | ... | 2 | 6 | 1 | 91 | 9 |
| 9 | Poona ... ... ... ... | 41 | 27 | 3 | 5 | 5 | 1 | 82 | 8 | 2 | ... | 7 | 1 | 92 | 8 |
| 10 | Sholápur ... ... ... | 57 | 15 | 1 | 3 | ... | 1 | 77 | 10 | ... | ... | 11 | 2 | 87 | 13 |
| 11 | Sátára ... ... ... | 28 | 31 | 2 | 4 | 8 | 1 | 74 | 17 | 1 | ... | 6 | 2 | 92 | 8 |
| | Average ... | 31 | 28 | 1 | 8 | 4 | 1 | 73 | 10 | 1 | 8 | 7 | 1 | 84 | 16 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 43 | 7 | 7 | 7 | 9 | ... | 73 | 11 | 1 | 8 | 4 | 3 | 85 | 15 |
| 13 | Bijápur ... ... ... ... | 47 | 13 | ... | 7 | 1 | ... | 68 | 10 | ... | 15 | 6 | 1 | 78 | 22 |
| 14 | Dhárwár ... ... ... | 29 | ... | 7 | 14 | 8 | ... | 58 | 10 | 1 | 24 | 5 | 2 | 69 | 31 |
| | Average ... | 40 | 7 | 4 | 9 | 6 | ... | 66 | 10 | 1 | 16 | 5 | 2 | 77 | 23 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 63 | ... | 22 | ... | 85 | 8 | 1 | ... | 4 | 2 | 94 | 6 |
| 16 | Kolába ... ... ... ... | ... | ... | 57 | ... | 34 | ... | 91 | 6 | 1 | ... | 2 | ... | 98 | 2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 26 | ... | 55 | ... | 81 | 7 | 5 | ... | 5 | 2 | 93 | 7 |
| 18 | Kánara ... ... ... ... | ... | ... | 78 | ... | 3 | ... | 81 | 3 | 11 | ... | ... | 5 | 95 | 5 |
| | Average ... | ... | ... | 52 | ... | 32 | ... | 84 | 7 | 4 | ... | 3 | 2 | 95 | 5 |
| | Average A ... | 30 | 19 | 7 | 7 | 7 | 1 | 71 | 10 | 1 | 11 | 6 | 1 | 82 | 18 |
| | *B.—Sind.* | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | 23 | 6 | 34 | 9 | ... | 4 | 76 | 6 | 7 | ... | 9 | 2 | 89 | 11 |
| 20 | Hyderabad ... ... ... | 14 | 33 | 19 | 5 | ... | 1 | 72 | 2 | 3 | 9 | 12 | 2 | 77 | 23 |
| 21 | Shikárpur ... ... ... | 28 | 2 | 20 | 24 | ... | ... | 74 | 8 | 1 | 1 | 15 | 1 | 83 | 17 |
| 22 | Upper Sind Frontier ... ... | 51 | 5 | 7 | 8 | ... | ... | 71 | 5 | 1 | 1 | 22 | ... | 77 | 23 |
| 23 | Thar and Párkar .. .. | 1 | 66 | 14 | 5 | ... | ... | 86 | 1 | ... | 2 | 11 | ... | 87 | 13 |
| | Average B .. | 20 | 23 | 20 | 12 | ... | 1 | 76 | 5 | 2 | 3 | 13 | 1 | 83 | 17 |
| | Average for the Presidency... | 29 | 20 | 8 | 8 | 6 | 1 | 72 | 9 | 1 | 10 | 7 | 1 | 82 | 18 |

*B.—Distribution of Crops.—Percentages shown on Presidency Area.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 4·4 | 4·9 | 3·7 | 8·8 | 3·1 | 11·1 | 4·9 | 3·4 | 4·1 | 11·0 | 2·6 | 2·4 | 4·7 | 7·6 |
| 2 | Kaira ... ... ... ... | 0·8 | 4·2 | 6·8 | 0·9 | 10·0 | 3·4 | 3·2 | 3·3 | 3·2 | 0·4 | 0·8 | 7·0 | 3·3 | 1·0 |
| 3 | Panch Mahále ... ... ... | ... | 0·8 | 2·9 | 0·9 | 3·3 | 44·0 | 1·4 | 3·0 | 0·4 | ... | 2·0 | 1·3 | 1·6 | 0·8 |
| 4 | Broach ... ... ... ... | 1·7 | 0·3 | 1·2 | 2·9 | 0·6 | ... | 1·3 | 2·5 | 9·7 | 9·1 | 1·1 | 1·1 | 1·5 | 5·9 |
| 5 | Surat ... ... ... ... | 1·6 | 0·2 | 6·0 | 1·2 | 2·7 | 0·2 | 1·7 | 3·5 | 3·0 | 3·3 | 2·5 | 1·2 | 1·9 | 2·8 |
| | Total ... | 8·5 | 10·4 | 20·6 | 14·7 | 19·7 | 58·7 | 12·5 | 15·7 | 20·4 | 23·8 | 9·0 | 13·0 | 13·0 | 18·1 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 7·4 | 14·6 | 1·4 | 11·4 | 1·4 | 2·4 | 8·6 | 7·5 | 4·2 | 36·0 | 8·4 | 9·9 | 8·4 | 25·0 |
| 7 | Násik ... ... ... ... | 2·0 | 16·0 | 2·8 | 17·8 | 11·3 | 3·2 | 8·5 | 8·2 | 7·0 | 0·6 | 13·3 | 2·9 | 8·4 | 4·9 |
| 8 | Ahmadnagar ... ... ... | 13·2 | 19·4 | 0·8 | 12·3 | 2·5 | 3·9 | 12·5 | 8·9 | 3·9 | 2·2 | 10·5 | 5·5 | 11·9 | 5·1 |
| 9 | Poona ... ... ... ... | 11·4 | 11·6 | 3·7 | 6·2 | 5·7 | 7·2 | 9·6 | 6·9 | 11·4 | ... | 10·2 | 5·1 | 9·3 | 3·7 |
| 10 | Sholápur ... ... ... | 16·0 | 6·4 | 1·3 | 3·1 | 0·2 | 11·7 | 9·0 | 8·7 | 3·8 | 0·3 | 15·3 | 10·7 | 9·0 | 5·9 |
| 11 | Sátára ... ... ... ... | 6·8 | 11·9 | 2·4 | 3·8 | 8·6 | 8·8 | 7·6 | 13·2 | 8·6 | 0·2 | 7·2 | 10·6 | 8·3 | 3·5 |
| | Total ... | 56·8 | 79·9 | 12·4 | 54·6 | 29·7 | 37·2 | 55·8 | 53·4 | 38·9 | 39·3 | 64·9 | 44·7 | 55·3 | 48·1 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 10·0 | 2·5 | 6·6 | 6·5 | 8·9 | 3·6 | 7·1 | 7·8 | 8·0 | 5·1 | 5·0 | 13·9 | 7·2 | 5·8 |
| 13 | Bijápur ... ... ... ... | 16·9 | 7·2 | 0·6 | 9.5 | 2·0 | 0·4 | 10·3 | 10·6 | 2·5 | 14·1 | 11·4 | 5·7 | 10·3 | 12·6 |
| 14 | Dhárwár ... ... ... | 7·8 | ... | 9·1 | 14·7 | 9·7 | ... | 6·7 | 8·2 | 6·4 | 17·7 | 6·3 | 14·1 | 6·8 | 13·6 |
| | Total ... | 34·7 | 9·7 | 16·3 | 30·7 | 20·6 | 4·0 | 24·1 | 26·6 | 16·9 | 36·9 | 22·7 | 33·7 | 24·3 | 32·0 |
| | *IV.—Konkan* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | .. | 19·8 | ... | 6·8 | 0·05 | 2·5 | 1·8 | 2·6 | ... | 1·4 | 2·1 | 2·4 | 0·6 |
| 16 | Kolába ... ... ... ... | .. | .. | 11·5 | ... | 6·7 | ... | 1·7 | 0·9 | 1·1 | ... | 0·4 | 0·4 | 1·6 | 0·2 |
| 17 | Ratnágiri ... ... ... | ... | .. | 8·0 | ... | 16·1 | 0·05 | 2·3 | 1·4 | 10·0 | ... | 1·6 | 2·7 | 2·3 | 0·7 |
| 18 | Kánara ... ... ... ... | ... | .. | 11·4 | ... | 0·4 | ... | 1·1 | 0·2 | 10·1 | ... | ... | 3·4 | 1·1 | 0.3 |
| | Total ... | ... | .. | 50·7 | .. | 30·0 | 0·1 | 7·6 | 4·3 | 23·8 | ... | 3·4 | 8·6 | 7·4 | 1·8 |
| | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

60. **Outturn of Crops.**—The anna valuation in the District Returns has been generally returned according to the newly prescribed standard by which an average crop is designated by 16 annas as directed in Government Resolution No. 6304, dated 5th September 1890. The local custom is to call an average crop a 12 anna crop, though this custom is said to vary in a few districts. With a view to avoid misunderstanding and to have an assurance that the anna estimates returned are according to the new standard, instructions were issued to the Mámledárs to the effect that in all the returns showing the anna estimates a note should invariably be added as below :—

> "In this return an average crop is designated by 16 annas. According to local custom an average crop is designated by annas."

Care was at the same time enjoined that in entering the figure which by local custom represents an average crop, no reference should be made to the estimates of outturn given in the formulæ. It had come to notice that instead of making due enquiry into local custom, some Mámledárs had made up their minds in some way or other as to the outturn in pounds and then referring to the formulæ had entered the anna valuation therein shown for that number of pounds. This is altogether misleading.

The Collector of Surat, Mr. Lely, suggests that the anna estimates by the Mámledárs should be returned as hitherto, according to local custom, and that the conversion according to the new standard should be left in the Collector's office. I quote the reasons from Mr. Lely's letter :—

"The delay has been almost entirely due to the difficulty in preparing anything like satisfactory anna estimates of outturn. The Mámledárs seem most of them hopelessly confused on the subject, having mixed up local custom with the formulæ and with the standard prescribed by the Government of India. I believe the figures at last arrived at to be fairly accurate, but would suggest that in future the Mámledárs be instructed to follow

the simple local custom leaving their figures to be reduced to the Government of India standard in the Collector's office. Any more elaborate directions only perplex them."

In the opinion on the point offered by me to Government, I went still further and urged that the conversion should be made in my own office. I fear that the final orders will result in misunderstanding and confusion.

I tabulate the reported figures for what they are worth.

*Approximate Anna Valuation of Principal Crops, 1889-90.*

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Rági. | Vari. | Tur. | Gram. | Cotton. |
| | *I.—Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... ... | 16 | 20 | 16 | 17 | 14 | 13 | 9 | 11 | 9 | 11 |
| 2 | Kaira ... ... ... ... ... | 10 | 13 | 12 | 9 | 12 | 10 | 8 | 13 | 6 | 11 |
| 3 | Panch Maháls... ... ... | Maize. 17 | 13 | 15 | 15 | 16 | 13 | 20 | 15 | 15 | 11 |
| 4 | Broach... ... ... ... ... | 11 | 16 | 7 | 15 | 14 | ... | ... | 11 | 15 | 17 |
| 5 | Surat ... ... ... ... ... | 12 | 13 | 12 | 9 | 7 | 6 | 3 | 12 | 10 | 10 |
| | *II.—Deccan.* | | | | | | | | | | |
| 6 | Khándesh ... ... ... .. | 14 | 12 | ... | 8 | ... | 8 | .. | ... | 8 | 15 |
| 7 | Násik ... ... ... ... ... | 10 | 14 | 15 | 11 | ... | 14 | 14 | 13 | 10 | 11 |
| 8 | Ahmadnagar ... ... ... ... | 9 | 10 | 10 | 10 | 9 | 12 | 8 | 11 | 11 | 12 |
| 9 | Poona ... ... ... ... .. | 12 | 13 | 19 | 12 | 16 | 17 | 14 | 12 | 14 | 8 |
| 10 | Sholápur ... ... ... ... | 10 | 8 | 7 | 11 | ... | 5 | 11 | 14 | 11 | 5 |
| 11 | Sátára ... ... ... ... ... | 9 | 8 | 10 | 8 | 9 | 8 | 9 | 9 | 11 | 8 |
| | *III.—Karnátak.* | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 11 | 7 | 14 | 14 | 16 | 11 | 12 | 8 | 14 | 12 |
| 13 | Bijápur... ... ... ... ... | 13 | 14 | 11 | 14 | 13 | 16 | 10 | 14 | 15 | 11 |
| 14 | Dhárwár ... ... ... ... | 9 | 6 | 9 | 10 | 4 | 8 | 6 | 6 | 10 | 7 |
| | *IV.—Konkan* | | | | | | | | | | |
| 15 | Thána .. ... ... ... ... | ... | ... | 13 | ... | ... | 13 | 12 | 12 | 12 | ... |
| 16 | Kolába... ... ... ... ... | ... | ... | 14 | ... | 12 | 12 | 11 | 10 | 14 | ... |
| 17 | Ratnágiri ... ... ... ... | .. | ... | 12 | ... | 11 | 8 | 9 | 8 | 7 | ... |
| 18 | Kánara... ... ... ... ... | ... | ... | 13 | ... | ... | 7 | 6 | 10 | 11 | ... |

*Note.*—In the above table the valuations are calculated on the standard by which 16 annas represent an average crop.

For want of sufficient moisture from the late rains rabi jowari in the Deccan and Karnátak and rice in parts of Gujarát specially suffered in outturn. Ripening bájri was also damaged by the excessively heavy rainfall in September-October in parts of the Deccan and Karnátak. Owing to these reasons the season, which would otherwise have been excellent, was either below or only up to average in many parts of the Deccan and Karnátak. In the Konkan and Gujarát the crops gave fairly average outturn. Cotton yielded a good outturn in Gujarát and Khándesh, and in Broach—one of the principal cotton growing districts—it was a bumper crop. For further detail I would refer to paragraph 67.

61. *Fruit-trees.*—There is a considerable increase reported in mango and toddy-palm trees and some increase in tamarind and jack trees, while cocoanut and date-palm trees give a considerable decrease. The figures, however, are as yet, at best, rough estimates. The fruit-trees are distributed in the several provinces as shown below, but no attempt is made to enumerate those in forest or in village-sites :—

*(Figures in thousands.)*

| No. | Province. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|
| 1 | Gujarát ... ... | 498 | 116 | 4 | 7 | 236 | 627 |
| 2 | Deccan ... ... | 770 | 53 | 10 | 4 | 9 | 113 |
| 3 | Karnátak ... ... | 351 | 100 | 19 | 66 | ... | 927 |
| 4 | Konkan ... ... | 509 | 39 | 174 | 1,474 | 89 | 12 |
| | Total, 1889-90 ... | 2,128 | 308 | 207 | 1,551 | 334 | 1,680 |
| | Total, 1888-89 ... | 1,980 | 298 | 190 | 1,599 | 295 | 1,763 |
| | | +148 | +10 | +17 | —48 | +39 | —83 |

Some districts add to the return a few fruit-trees of special local importance as shown below, but the list is still incomplete:—

| Trees and Districts. | Number. | Trees and Districts. | Number. |
|---|---|---|---|
| 1.—*Moha (Bassia latifolia.)* | | 4.—*Keshewnut (Anacardium occidentale).* | |
| Kaira ... ... ... ... | 129,161 | Thána ... ... ... | 5,251 |
| Panch Maháls ... ... ... | 89,256 | Ratnágiri ... ... ... | 106,267 |
| Broach ... ... ... ... | 1,068 | Kánara ... ... ... | 89,597 |
| Khándesh ... ... ... | 55,455 | Belgaum ... ... ... | 1,105 |
| Násik..... ... ... ... | 3,254 | 5.—*Hirda (Terminalia Chebula).* | |
| 2.—*Betel-nut (Areca Catechu.)* | | Ahmadnagar... ... ... | 12,719 |
| Thána ... ... ... ... | 4,437 | Násik... ... ... ... | 1,000 |
| Kolába ... ... ... ... | 2,522 | 6.—*Rátambi (Garcinia indica).* | |
| Ratnágiri ... ... ... | 305,188 | Ratnágiri ... ... ... | 14,598 |
| Kánara ... ... ... ... | 7,108,500 | 7.—*Fig (Ficus Carica).* | |
| 3.—*Ráyan (Mimusops hexandra.)* | | Poona... ... ... ... | 35,356 |
| Kaira ... ... ... ... | 72,749 | Ahmadnagar... ... ... | 2,585 |
| Panch Maháls ... ... ... | 3,845 | Násik... ... ... ... | 2,921 |
| Broach ... ... ... ... | 1,551 | | |

**Return No. IV.—Irrigation.**

62. The net irrigated area amounts to 3·1 per cent. of the net cropped area in the Presidency Proper and 84 per cent. in Sind. The irrigated area in the Presidency Proper shows a fall of 41,000 acres, or 4·8 per cent., of which 6,000 acres belong to the canal irrigated area and 35,000 acres to that irrigated from tanks, wells and other sources. The principal variations are noted in the margin. The decrease is generally attributed to sufficiency of monsoon rainfall—a reason specially explaining the large decrease in Ahmadabad and Kaira.

| District. | Canal. | Tanks, Wells, &c. |
|---|---|---|
| | Acres. | Acres. |
| Ahmadabad ... | + 740 | — 22,000 |
| Kaira ... ... | + 3,700 | — 13,800 |
| Khándesh ... | — 5,500 | — 2,000 |
| Násik ... ... | — 3,900 | — 5,400 |
| Ahmadnagar ... | — 3,700 | — 500 |
| Poona ... ... | + 4,300 | + 7,400 |
| Sholápur ... | — 60 | + 3,300 |
| Sátára ... ... | + 600 | + 1,800 |
| Belgaum ... | + 500 | — 800 |
| Bijápur ... ... | + 200 | — 1,000 |
| Dhárwár ... | — 600 | — 2,100 |

63. Among irrigated crops the decrease is found in all crops except rice and non-food crops. The increase in rice is confined to Gujarát, where the total area under rice also shows a considerable increase. Wheat shows a decrease in north Gujarát and north Deccan, while the south Deccan gives some increase. Sugarcane shows a general decrease, proportionate to the decrease noticed above in the area devoted to the cultivation of this crop.

| | Thousand Acres. |
|---|---|
| Rice ... ... ... | + 15 |
| Wheat ... ... ... | — 20 |
| Other cereals and pulses... | — 9 |
| Sugarcane ... ... | — 21 |
| Other food crops ... ... | — 12 |
| Non-food crops ... ... | + 5 |
| Fodder crops ... ... | — 3 |

**Return No. V.—Agricultural Stock.**

64. It was not known how far the district returns include the stock of large towns and cities. Special information obtained from the Collectors shows that no return is made of stock in the cities of Ahmadabad, Surat and Broach, but that elsewhere, the district return includes the stock of all towns and cities, except in Poona and Belgaum, where cantonment returns are wanting. It is hoped that the exceptions will soon disappear.

65. *Cattle.*—The total number of cattle shows an increase of nearly 1½ lákhs, or 1·7 per cent. The increase is general except in 5 districts, and is attributed generally to the favourable season and plentiful pasture. In some districts the increase is also attributed to the arrival of roving herds of cattle for grazing, but the standing orders on this point seem to have been lost sight of. I quote them here to invite special attention :—

| | Thousand. |
|---|---|
| Thána ... ... ... | +48 |
| Bijápur ... ... ... | +30 |
| Panch Maháls ... ... | +27 |
| Sholápur ... ... ... | +14 |
| Kánara ... ... ... | +14 |
| Kaira ... ... ... | +10 |
| Poona ... ... ... | −23 |
| Násik ... ... ... | −10 |

"All animals belonging to a family should be entered against the name of the head of the family, even though the animals are temporarily absent from the village on grazing grounds or elsewhere. Animals belonging to other villages should be excluded."

The increase in Thána is especially large, and though it is not explained by the Collector, it may probably be due in part to the arrival of cattle from the Násik and Poona Districts where the number of cattle shows a considerable decrease owing to insufficient pasture:

Among the sub-heads of cattle, plough cattle show a large increase (64,000) in plough oxen, and a small decrease in plough-buffaloes. Milch cattle give an increase of 29,000 in cows and of 3,000 in she-buffaloes.

66. *Sheep and Goats.*—The enumeration is doubtful. There is an increase of 71,000, or 6·2 per cent., in goats, but a decrease of 43,000, or 2·1 per cent., in sheep. The chief variations are noted in the margin. In sheep, Gujarát districts show a small increase, while elsewhere there is a general decrease except in Sholápur, Ahmadnagar and Belgaum. In goats the alleged increase which I do not credit is confined to the Deccan, while Ahmadabad in Gujarát and the Karnátak districts give a considerable decrease. The decrease in goats in Ahmadabad is attributed to the absence of the special reason for increase last year, *viz.*, large flocks from Native States for grazing. In Bijápur, the decrease is attributed to correct registration. The registration of sheep and goats is specially defective, and no satisfactory explanations as to variations have been received.

| | Thousand. | |
|---|---|---|
| | Sheep. | Goats. |
| Ahmadabad ... | ... | −11 |
| Khándesh ... ... | —2 | +14 |
| Násik ... ... | —3 | +12 |
| Poona ... ... | —14 | +11 |
| Sholápur ... ... | +15 | +11 |
| Bijápur ... ... | −1 | −10 |
| Dhárwár ... ... | −5 | −12 |
| Thána ... ... | ... | + 8 |

*Ploughs.*—Show an increase of 19,000 in small ploughs, but a small decrease (1,700) in large ploughs.

*Carts.*—There is an increase of about 2,500 in light and of 7,000 in heavy carts.

The calculations based on the reported figures to find the area cultivated per pair of plough cattle have been made as usual. But as they hardly differ from the figures given in paragraph 61 of the report for 1887-88, they need not be shown again. Suffice it to say that they corroborate the previously reported figures which may therefore be accepted with less reserve.

### B.—RAINFALL.

*Season 1889-90.*

67. The rainfall for each district has been analysed in the appended tables (pages xxiii-xxxv), but the following comparative table is required in this place :—

*Rainfall at District Head-quarters.*

| No. | | District Head-quarters. | Annual Rainfall ending 31st December. | | | | |
|---|---|---|---|---|---|---|---|
| | | | Average of eleven years ending 1886. Inches. | 1888. | | 1889. | |
| | | | | Fall. Inches. | Rainy days. | Fall. Inches. | Rainy days. |
| 1 | Deccan. | Dhulia (Khándesh) ... ... | 25·79 | 18·54 | 54 | 17·65 | 52 |
| 2 | Deccan. | Násik ... ... ... ... | 33·74 | 19·99 | 84 | 22·93 | 85 |
| 3 | Deccan. | Ahmadnagar ... ... ... | 25·11 | 19·26 | 61 | 23·15 | 64 |
| 4 | Deccan. | Poona ... ... ... ... | 31·06 | 34·02 | 90 | 37·49 | 82 |
| 5 | Deccan. | Sholápur ... ... ... | 33·33 | 25·81 | 64 | 33·22 | 65 |
| 6 | Deccan. | Sátára ... ... ... ... | 40·84 | 51·82 | 123 | 46·21 | 114 |
| 7 | Karná-tak. | Belgaum ... ... ... | 46·80 | 45·81 | 134 | 55·40 | 140 |
| 8 | Karná-tak. | Bijápur ... ... ... | 26·79 | 21·92 | 102 | 36·04 | 90 |
| 9 | Karná-tak. | Dhárwár ... ... ... | 32·95 | 33·34 | 115 | 38·64 | 102 |
| 10 | Konkan. | Kárwár (Kánara) ... ... | 116·62 | 133·93 | 121 | 179·93 | 123 |
| 11 | Konkan. | Ratnágiri ... ... ... | 100·73 | 85·37 | 103 | 106·97 | 116 |
| 12 | Konkan. | Alibág (Kolába) ... ... | 84·79 | 75·55 | 99 | 86·01 | 111 |
| 13 | Konkan. | Thána ... ... ... ... | 99·12 | 87·16 | 105 | 96·73 | 110 |
| 14 | Gujarát. | Surat ... ... ... ... | 44·06 | 29·49 | 61 | 40·22 | 77 |
| 15 | Gujarát. | Broach... ... ... ... | 44·21 | 18·96 | 47 | 33·73 | 57 |
| 16 | Gujarát. | Kaira ... ... ... ... | 37·13 | 20·06 | 44 | 41·22 | 66 |
| 17 | Gujarát. | Godhra (Panch Maháls) ... | 43·24 | 25·08 | 54 | 36·02 | 70 |
| 18 | Gujarát. | Ahmadabad ... ... ... | 29·92 | 14·76 | 29 | 24·89 | 52 |

The monsoon rains began early and were generally speaking far more favourable for kharíf than for rabi. The rabi rains were abnormally heavy in October and closed too soon.

A few remarks may be made on the different provinces of the Presidency.

*Deccan.*—The rain was insufficient for general sowing till the middle of July in east Khándesh and east Deccan. Elsewhere it was more timely. In the east, away from the *gháts*, the August rain was light with the immediate result that the kharíf standing crops began to suffer. Fodder became scarce, especially in the dry tálukas of Násik, Ahmadnagar and Poona. The rain in Purva was not general, and the long break was not fully relieved till the Uttara rain in September. This was very valuable. It ensured the safety of the kharíf and a large area at least of rabi. The rain in October (in Chitra, which is always harmful) was very heavy. It delayed rabi sowings and injured important kharíf staples, being or about to be harvested. Still the kharíf was fair. Cotton was very good in Khándesh. On the other hand, the rabi checked by the unseasonable Chitra rain or sown late, yielded very poorly.

*Karnátak.*—Away from the immediate neighbourhood of the ghâts, the early sowing rains of the South-West Monsoon were scant, though seasonable. These were followed by very favourable falls in Uttara and Hast, and prospects were excellent till the heavy Chitra rain, much heavier than in the Deccan, came causing damage all round. The kharíf yield in the east was much below average. It was fair in the west near the ghâts. The rabi harvest was fair and would have been good but for the absence of moisture from rain and dew in the later months.

*Konkan.*—The rains were uniformly seasonable and good, till the Chitra rain, unnecessary and untimely, reduced the kharíf—the more important season below ghâts—to only a fair crop. The rabi was also fair.

*Gujarát.*—The kharíf rain was on the whole seasonable and sufficient for full kharíf sowing. The closing rains of Uttara and Hast in September, though favourable to kharíf crops and to rabi sowing were generally deficient, especially for rice. Kharíf, except rice, gave a fairly good outturn, cotton being a bumper crop in Broach. Owing to insufficiency of late rains the rabi area was short and the outturn was only fair. The season was, on the whole, much better than that of previous year in many parts as had been anticipated in last year's report (paragraph 69).

*Season 1890-91.*

68. It is out of place to refer to the rain of the monsoon of 1890. It will be enough to say that the tendency to improvement, begun in 1889, continues. We have had a cycle of good cotton seasons, and my own forecast is that as we go on the rain is more likely to favour wheat than early sown cotton in the next few years.

### C.—CROP EXPERIMENTS.

69. The number of crop experiments reported during the year 1889-90 was 81 against 63 in the preceding year. A separate report regarding these experiments has already been submitted to Government.

## VIII.—TRADE AND TRADE STATISTICS.

70. Under Government Resolution No. 3725, dated 29th May 1890, the registration and compilation work in connection of the Rail-borne Trade of the Presidency Proper has since 1st July last been transferred to the Agricultural Department. A detailed report for the year ending 31st March 1890 has already been separately submitted to Government. Agreeably to Government Resolution No. 6280, dated 26th August 1889, I reviewed for the second time the Annual Returns of the Rail-borne Trade of the Province of Sind. The total trade registered in the Presidency Proper and Sind during the year is shown below :—

| Year. | Presidency Proper. | | | | Sind. | | | |
|---|---|---|---|---|---|---|---|---|
| | External Trade. | | Local Trade. | Total Trade. | External Trade. | | Local Trade. | Total Trade. |
| | Imports. | Exports. | | | Imports. | Exports. | | |
| | Figures in lákhs of maunds (1 maund = $82\frac{2}{7}$ lbs.) | | | | | | | |
| Average .. ... ... | 291 | 86 | 277 | 654 | 48 | 11 | 63 | 122 |
| 1888-89 ... ... ... | 324 | 91 | 292 | 707 | 55 | 12 | 68 | 135 |
| 1889-90 ... ... ... | 281 | 89 | 256 | 626 | 94 | 16 | 65 | 175 |
| Increase or decrease over average ... ... ... | —10 | +3 | —21 | —28 | +46 | +5 | +2 | +53 |
| Increase or decrease over last year ... ... ... | —43 | —2 | —36 | —81 | +39 | +4 | —3 | +40 |

The Presidency Trade shows a decrease both below average and last year by 4 and 11 per cent., respectively, while the Trade of Sind increase of 44 and 29 per cent. respectively. To the total external trade of Sind the Punjáb contributed 98 per cent. The Road-borne Trade has, as usual, been registered at six selected nákás under the rotation system.

## IX.—ARCHÆOLOGY.

71. No reports on the subject have been received from the district officers under Government Resolution No. 1672, dated 13th April 1889, General Department.

## X.—MINERAL STATISTICS.

72. The return of minerals required by Circular No. 80 M—18-7, dated 11th September 1888, from the Government of India, was submitted in the amended form in July last. It was second of its kind, but amplified under orders from the Supreme Government. The value of the statistics is very low. The scope is too ambitious. Gain in value and interest would result if attention is confined to obtaining statistics of valuable minerals, *e. g.*, coal, gold, in those localities where such are known to exist. No useful purpose is served by the fruitless endeavour to ascertain the outcrop of such minerals as clays and quarry stones and less in endeavouring to assess the value thereof.

## XI.—DAIRY EXPERIMENTS.

73. As I wish to give a somewhat detailed account of the steps taken by the Department to introduce improved dairy machinery, I have reserved the account for an Appendix (C).

## CONCLUSION.

74. My calls on the Press have been even heavier than usual. I may be allowed to place on record my testimony to the neatness and promptness of the work of the Government Central Press. The extent of the work done on my demand may thus be shown :—

| | Folio pages. |
|---|---|
| Annual Reports (including Trade, Crop Experiments and Farm Reports) ... ... ... ... ... | 69,020 |
| Quarterly Trade Returns ... ... ... ... | 46,928 |
| Special Reports... ... ... ... ... | 3,300 |
| Forms (for Rain Returns, Forecasts, &c.) ... ... | 45,995 |
| Miscellaneous ... ... ... ... ... | 3,800 |
| Total ... | 169,043 |

75. I have much pleasure in reporting to Government that Ráo Bahádur Icchárám Bhagvándás has both in the post of Superintendent and in that of Personal Assistant, merited my warmest commendation. It was not an easy matter to fill the latter post, when vacated by an officer of such varied experience, ability and devotion to duty as Ráo Bahádur Bhimbhái Kirpárám. Mr. Yeshvantrao Nilkanth has succeeded to the post of Superintendent *vice* Mr. Icchárám. He has proved himself skilful in the art of getting work done cheerfully by a large office and in training new hands. He is also, from his special study of the Economic Products of the Presidency and their uses, invaluable to me in meeting the calls of the Compiler of the Economic Dictionary, the Indian Museum and other public bodies for statistical information of all kinds. On the Bhadgaon Farm, Mr. Mehta, M.R.A.C., has fully maintained his reputation as a good scientific and practical farmer, a trustworthy experimenter, and an enthusiastic worker ; and has exhibited great skill in dealing with cattle-diseases.

I am beholden to the subordinate members of my office for accuracy, punctuality and intelligence in the heavy statistical work which they perform.

I have the honour to be,
Sir,
Your most obedient Servant,
E. C. OZANNE,
Director, Land Records and Agriculture,
Bombay.

# STATISTICS.

## A.—AGRICULTURAL.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

III. A.—Details under Khari'f and Rabi Crops.

III. B.—Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1889-90.

| No. | District. | Number and Area of Villages.* | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Surveyed Alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmedabad .. .. .. | 832 | 2,318,721 | 52 | 123,518 | 884 | 2,442,239 | 448 | 1,056,570 | 384 | 1,262,151 | 36 | 98,917 | 868 | 2,417,638 | .. | .... | 16 | 24,601 | 16 | 24,601 |
| 2 | Kaira .. .. .. .. | 563 | 994,259 | 28 | 27,464 | 591 | 1,021,723 | 436 | 757,836 | 91 | 177,131 | .. | .... | 527 | 934,967 | 36 | 59,292 | 28 | 27,464 | 64 | 86,756 |
| 3 | Panch Mahâls .. .. .. | 611½ | 902,289 | 79½ | 125,683 | 691 | 1,027,972 | 403 | 627,303 | 149½ | 198,200 | 32 | 42,652 | 584½ | 868,155 | 59 | 76,786 | 47½ | 83,031 | 106½ | 159,817 |
| 4 | Broach .. .. .. .. | 408 | 917,748 | 15 | 18,724 | 423 | 936,472 | 407 | 916,569 | 1 | 1,179 | .. | .... | 408 | 917,748 | .. | .... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat.. .. .. .. .. | 820½ | 1,026,654 | 32½ | 31,055 | 853 | 1,057,709 | 810½ | 1,014,419 | 10 | 12,235 | 4½ | 5,254 | 825 | 1,031,908 | .. | .... | 28 | 25,801 | 28 | 25,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. | 3,223 | 5,453,249 | 111½ | 209,463 | 3,334½ | 5,662,712 | 2,677½ | 4,619,814 | 187 | 374,458 | 63½ | 109,120 | 2,928 | 5,103,392 | 358½ | 458,977 | 48 | 100,343 | 406½ | 559,320 |
| 7 | Násik .. .. .. .. | 1,512 | 3,420,580 | 184 | 299,738 | 1,696 | 3,720,318 | 1,500 | 3,395,318 | .. | .... | 80 | 168,073 | 1,580 | 3,563,391 | 12 | 25,262 | 104 | 131,665 | 116 | 156,927 |
| 8 | Ahmednagar .. .. .. | 1,223 | 3,669,565 | 151 | 550,604 | 1,374 | 4,220,169 | 1,223 | 3,639,565 | .. | .... | 109½ | 444,282 | 1,332½ | 4,113,847 | .. | .... | 41½ | 106,322 | 41½ | 106,322 |
| 9 | Poona .. .. .. .. | 1,002¾ | 2,861,691 | 201¼ | 501,769 | 1,204 | 3,363,460 | 999¾ | 2,860,031 | .. | .... | 161¼ | 462,123 | 1,161 | 3,322,154 | 3 | 1,660 | 40 | 39,646 | 43 | 41,306 |
| 10 | Sholápur .. .. .. .. | 665 | 2,697,954 | 52 | 209,111 | 717 | 2,907,065 | 665 | 2,697,954 | .. | .... | 52 | 209,111 | 717 | 2,907,065 | .. | .... | .. | .... | .. | .... |
| 11 | Sátára .. .. .. .. | 960 | 2,460,320 | 397 | 622,995 | 1,357 | 3,083,315 | 960 | 2,460,320 | .. | .... | 269 | 494,897 | 1,229 | 2,955,217 | .. | .... | 128 | 128,098 | 128 | 128,098 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. | 892 | 2,278,759 | 241 | 568,515 | 1,133 | 2,847,274 | 892 | 2,278,759 | .. | .... | 183 | 540,390 | 1,075 | 2,819,149 | .. | .... | 58 | 28,125 | 58 | 28,125 |
| 13 | Bijápur .. .. .. .. | 1,011 | 3,205,692 | 162 | 422,008 | 1,173 | 3,627,700 | 1,011 | 3,205,692 | .. | .... | 155 | 395,537 | 1,166 | 3,601,229 | .. | .... | 7 | 26,471 | 7 | 26,471 |
| 14 | Dhárwár .. .. .. .. | 1,289 | 2,689,250 | 184 | 256,566 | 1,473 | 2,945,816 | 1,289 | 2,689,250 | .. | .... | 137 | 180,871 | 1,426 | 2,870,121 | .. | .... | 47 | 75,695 | 47 | 75,695 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. | 1,880 | 2,397,963 | 104 | 122,168 | 1,984 | 2,520,131 | 1,854 | 2,368,733 | 12 | 12,495 | 28 | 33,852 | 1,894 | 2,415,080 | 14 | 16,735 | 76 | 88,316 | 90 | 105,051 |
| 16 | Kolába .. .. .. .. | 1,264 | 1,103,395 | 80 | 30,461 | 1,344 | 1,133,856 | 763 | 571,562 | 499 | 531,744 | 6 | 3,466 | 1,268 | 1,106,772 | 2 | 89 | 74 | 26,995 | 76 | 27,084 |
| 17 | Ratnágiri .. .. .. .. | 1,271½ | 2,394,276 | 62 | 109,719 | 1,333½ | 2,503,995 | 58 | 133,215 | 935½ | 1,617,915 | 17 | 33,724 | 1,010½ | 1,784,854 | 278 | 643,146 | 45 | 75,995 | 323 | 719,141 |
| 18 | Kánara .. .. .. .. | 1,416 | 2,519,930 | .. | .... | 1,416 | 2,519,930 | 1,335 | 2,435,365 | .. | .... | .. | .... | 1,335 | 2,435,365 | 81 | 84,565 | .. | .... | 81 | 84,565 |
| | Total A. ... | 20,844¼ | 43,312,295 | 2,136¾ | 4,229,561 | 22,981 | 47,541,856 | 17,731¾ | 37,758,275 | 2,269 | 4,187,508 | 1,333¾ | 3,222,269 | 21,334½ | 45,168,052 | 843½ | 1,366,512 | 803 | 1,007,292 | 1,646½ | 2,373,804 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. .. | 857 | 5,078,581 | 14 | 35,161 | 871 | 5,113,742 | 759 | 3,040,439 | 42 | 1,912,352 | 12 | 20,901 | 813 | 4,973,692 | 56 | 125,790 | 2 | 14,260 | 58 | 140,050 |
| 20 | Hyderabad.. .. .. .. | 1,339 | 5,401,555 | 58 | 268,234 | 1,397 | 5,669,789 | 1,205 | 4,159,929 | 134 | 1,241,626 | 58 | 268,234 | 1,397 | 5,669,789 | .. | .... | .. | .... | .. | .... |
| 21 | Shikárpur .. .. .. .. | 1,175 | 4,938,119 | 17 | 279,085 | 1,192 | 5,217,204 | 1,141 | 4,064,041 | .. | .... | 14 | 233,673 | 1,155 | 4,297,714 | 34 | 874,078 | 3 | 45,412 | 37 | 919,490 |
| 22 | Upper Sind Frontier .. .. | 297 | 1,561,102 | 7 | 40,718 | 304 | 1,601,820 | 231 | 669,677 | 1 | 120,531 | 6 | 27,333 | 238 | 817,541 | 65 | 770,894 | 1 | 13,385 | 66 | 784,279 |
| 23 | Thár and Párkar .. .. .. | 71 | 8,488,494 | .. | .... | 71 | 8,488,494 | .. | .... | 71 | 8,488,494 | .. | .... | 71 | 8,488,494 | .. | .... | .. | .... | .. | .... |
| | Total B. ... | 3,739 | 25,467,851 | 96 | 623,198 | 3,835 | 26,091,049 | 3,336 | 11,934,086 | 248 | 11,763,003 | 90 | 550,141 | 3,674 | 24,247,230 | 155 | 1,770,762 | 6 | 73,057 | 161 | 1,843,819 |
| | Grand Total ... | 24,583¼ | 68,780,146 | 2,232¾ | 4,852,759 | 26,816 | 73,632,905 | 21,067¾ | 49,692,361 | 2,517 | 15,950,511 | 1,423¾ | 3,772,410 | 25,008½ | 69,415,282 | 998½ | 3,137,274 | 809 | 1,080,349 | 1,807½ | 4,217,623 |

* Exclusive of Foreign Territory, Feudatory and Tributary States.

# II.—Area, Cultivated and Uncultivated, 1889-90.

| No. | District. | | Total Area as in Columns 5, 6 and 7 of Return No. I. | Cultivated Area. Gross Area cropped. | Deduct Area cropped more than once. | Remainder net Area cropped. | Add Current Fallows. | Total Columns 5 and 6. | Details of Column 7. Assessed Land. | Unassessed Land. | Uncultivated Area. Available for Cultivation. Assessed Land. | Unassessed Land. | Not available for Cultivation. Forest. | Other. | Total Columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | A.—Bombay Presidency Proper. | | Acres. | | | | | Acres. | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmedabad ... | Rayatwári ... ... ... | 1,056,570 | 702,708 | 17,092 | 685,616 | 94,521 | 780,137 | 777,681 | 2,456 | 73,129 | 13,344 | 21,555 | 168,405 | 276,433 |
| | | Other Government ... ... | 1,262,151 | 602,268 | 6,894 | 595,374 | 392,004 | 987,378 | 987,117 | 261 | ..... | 6,264 | ..... | 268,509 | 274,773 |
| | | Alienated ... ... ... | 98,917 | 40,031 | 271 | 39,760 | 59,076 | 98,836 | 98,836 | ..... | ..... | ..... | ..... | 81 | 81 |
| | | Total ... | 2,417,638 | 1,345,007 | 24,257 | 1,320,750 | 545,601 | 1,866,351 | 1,863,634 | 2,717 | 73,129 | 19,608 | 21,555 | 436,995 | 551,287 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 757,836 | 565,131 | 18,349 | 546,782 | 39,570 | 586,352 | 585,861 | 491 | 70,625 | 1,185 | 39 | 99,635 | 171,484 |
| | | Other Government ... ... | 177,131 | 160,176 | 5,248 | 154,928 | 6,350 | 161,278 | 161,252 | 26 | 470 | 22 | ..... | 15,361 | 15,853 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 934,967 | 725,307 | 23,597 | 701,710 | 45,920 | 747,630 | 747,113 | 517 | 71,095 | 1,207 | 39 | 114,996 | 187,337 |
| 3 | Panch Maháls ... | Rayatwári ... ... ... | 627,303 | 281,604 | 57,026 | 224,578 | 29,453 | 254,031 | 252,046 | 1,985 | 95,009 | 125,955 | 110,189 | 42,119 | 373,272 |
| | | Other Government ... ... | 198,200 | 71,305 | 9,248 | 62.057 | 67,848 | 129,905 | 129,725 | 180 | 24,209 | 13,884 | ..... | 30,202 | 68,295 |
| | | Alienated ... ... ... | 42,652 | 22,888 | 2,131 | 20,757 | 16,210 | 36,967 | 36,967 | ..... | ..... | ..... | ..... | 5,685 | 5,685 |
| | | Total ... | 868,155 | 375,797 | 68,405 | 307,392 | 113,511 | 420,903 | 418,738 | 2,165 | 119,218 | 139,839 | 110,189 | 78,006 | 447,252 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 916,569 | 595,270 | 952 | 594,318 | 49,782 | 644,100 | 636,533 | 7,567 | 27,733 | 1,985 | ..... | 242,751 | 272,469 |
| | | Other Government ... ... | 1,179 | 906 | ..... | 906 | 236 | 1,142 | 1,142 | ..... | ..... | ..... | ..... | 37 | 37 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 917,748 | 596,176 | 952 | 595,224 | 50,018 | 645,242 | 637,675 | 7,567 | 27,733 | 1,985 | ... | 242,788 | 272,506 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 1,014,419 | 523,610 | 51,484 | 472,176 | 251,585 | 723,761 | 722,293 | 1,468 | 36,393 | 30,148 | 43,806 | 180,311 | 290,658 |
| | | Other Government ... ... | 12,235 | 5,673 | 499 | 5,174 | 4,585 | 9,759 | 9,759 | ..... | 593 | 759 | ..... | 1,124 | 2,476 |
| | | Alienated ... ... ... | 5,254 | 3,787 | 20 | 3,767 | 1,130 | 4,897 | 4,896 | 1 | 210 | ..... | ..... | 147 | 357 |
| | | Total ... | 1,031,908 | 533,070 | 51,953 | 481,117 | 257,300 | 738,417 | 736,948 | 1,469 | 37,196 | 30,907 | 43,806 | 181,582 | 293,491 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 4,619,814 | 2,822,529 | 8,008 | 2,814,521 | 206,359 | 3,020,880 | 3,015,560 | 5,320 | 445,417 | 270,660 | 283,811 | 599,046 | 1,598,934 |
| | | Other Government ... ... | 374,458 | 53,000 | 20 | 52,980 | 1,040 | 54,020 | 4,360 | 49,660 | 5 | 137,153 | 182,152 | 1,128 | 320,438 |
| | | Alienated ... ... ... | 109 120 | 70,197 | 202 | 69,995 | 9,507 | 79,502 | 79,474 | 28 | 11,062 | 5,880 | 750 | 11,926 | 29,618 |
| | | Total ... | 5,103,392 | 2,945,726 | 8,230 | 2,937,496 | 216,906 | 3,154,402 | 3,099,394 | 55,008 | 456,484 | 413,693 | 466,713 | 612,100 | 1,948,990 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 3,395,318 | 1,877,856 | 18,271 | 1,859,585 | 317,607 | 2,177,192 | 2,176,792 | 400 | 110,442 | 36,025 | 759,917 | 311,742 | 1,218,126 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 168,073 | 109,920 | 1,471 | 108,449 | 16,989 | 125,438 | 125,382 | 56 | 9,863 | 8,617 | 2,299 | 21,856 | 42,635 |
| | | Total ... | 3,563,391 | 1,987,776 | 19,742 | 1,968,034 | 334,596 | 2,302,630 | 2,302,174 | 456 | 120,305 | 44,642 | 762,216 | 333,598 | 1,260,761 |
| 8 | Ahmednagar ... | Rayatwári ... ... ... | 3,669,565 | 2,436,478 | 30,556 | 2,405,922 | 297,839 | 2,703,761 | 2,703,263 | 498 | 63,954 | 6,652 | 536,861 | 358,337 | 965,804 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 444,282 | 318,597 | 1,597 | 317,000 | 45,848 | 362,848 | 362,822 | 26 | 12,984 | 2,705 | 393 | 65,352 | 81,434 |
| | | Total ... | 4,113,847 | 2,755,075 | 32,153 | 2,722,922 | 343,687 | 3,066,609 | 3,066,085 | 524 | 76,938 | 9,357 | 537,254 | 423,689 | 1,047,238 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 2,860,031 | 1,810,572 | 61,441 | 1,749,131 | 325,181 | 2,074,312 | 2,073,892 | 420 | 32,808 | 258 | 393,143 | 359,510 | 785,719 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 462,123 | 320,439 | 11,358 | 309,081 | 57,112 | 366,193 | 366,128 | 65 | 1,593 | 77 | 1,253 | 93,007 | 95,930 |
| | | Total ... | 3,322,154 | 2,131,011 | 72,799 | 2,058,212 | 382,293 | 2,440,505 | 2,440,020 | 485 | 34,401 | 335 | 394,396 | 452,517 | 881,649 |
| 10 | Sholápur ... | Rayatwári ... ... ... | 2,697,954 | 2,012,638 | 27,289 | 1,985,349 | 294,692 | 2,280,041 | 2,279,746 | 295 | 19,673 | 8,632 | 177,484 | 212,124 | 417,913 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 209,111 | 150,748 | 2,206 | 148,542 | 26,474 | 175,016 | 174,887 | 129 | 125 | 3,629 | ..... | 30,341 | 34,095 |
| | | Total ... | 2,907,065 | 2,163,386 | 29,495 | 2,133,891 | 321,166 | 2,455,057 | 2,454,633 | 424 | 19,798 | 12,261 | 177,484 | 242,465 | 452,008 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Sátára ... | Rayatwári ... ... ... | 2,460,320 | 1,566,154 | 92,869 | 1,473,285 | 300,632 | 1,773,917 | 1,773,627 | 290 | 30,211 | 8,138 | 421,635 | 226,419 | 686,403 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 494,897 | 334,167 | 26,286 | 307,881 | 100,487 | 408,368 | 408,368 | ..... | 220 | 9,811 | 12,403 | 64,095 | 86,529 |
| | | Total ... | 2,955,217 | 1,900,321 | 119,155 | 1,781,166 | 401,119 | 2,182,285 | 2,181,995 | 290 | 30,431 | 17,949 | 434,038 | 290,514 | 772,932 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 2,278,759 | 1,448,464 | 28,617 | 1,419,847 | 239,241 | 1,659,088 | 1,657,637 | 1,451 | 64,098 | 18,779 | 389,438 | 147,356 | 619,671 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 540,390 | 335,159 | 3,170 | 331,980 | 74,283 | 406,263 | 405,966 | 297 | 46,685 | 1,598 | 25,300 | 60,544 | 134,127 |
| | | Total ... | 2,819,149 | 1,783,623 | 31,796 | 1,751,827 | 313,524 | 2,065,351 | 2,063,603 | 1,748 | 110,783 | 20,377 | 414,738 | 207,900 | 753,798 |
| 13 | Bijápur... ... | Rayatwári ... ... ... | 3,205,692 | 2,463,183 | 5,746 | 2,457,437 | 290,938 | 2,748,375 | 2,748,268 | 107 | 105,610 | 19,575 | 162,451 | 169,681 | 457,317 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 395,537 | 285,503 | 358 | 285,145 | 44,773 | 329,918 | 329,894 | 24 | 12,447 | 1,188 | 27,644 | 24,440 | 65,619 |
| | | Total ... | 3,601,229 | 2,748,686 | 6,104 | 2,742,582 | 335,711 | 3,078,293 | 3,078,162 | 131 | 118,057 | 20,763 | 189,995 | 194,121 | 522,936 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 2,689,250 | 1,965,945 | 25,513 | 1,940,432 | 232,816 | 2,173,248 | 2,173,096 | 152 | 49,128 | 2 | 276,488 | 190,384 | 516,002 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 180,871 | 109,677 | 1,623 | 108,054 | 29,626 | 137,680 | 137,488 | 192 | 12,359 | 14,715 | ..... | 16,117 | 43,191 |
| | | Total ... | 2,870,121 | 2,075,622 | 27,136 | 2,048,486 | 262,442 | 2,310,928 | 2,310,584 | 344 | 61,487 | 14,717 | 276,488 | 206,501 | 559,193 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári ... ... ... | 2,368,733 | 527,920 | 5,965 | 521,955 | 488,910 | 1,010,865 | 1,006,973 | 3,892 | 44,705 | 73,217 | 464,552 | 775,394 | 1,357,868 |
| | | Other Government ... ... | 12,495 | 2,217 | 12 | 2,205 | 1,430 | 3,635 | 3,491 | 144 | 1 | 7,620 | 463 | 776 | 8,860 |
| | | Alienated ... ... ... | 33,852 | 8,537 | 56 | 8,481 | 10,562 | 19,043 | 18,917 | 126 | 1 | 6,119 | 1,303 | 7,386 | 14,809 |
| | | Total ... | 2,415,080 | 538,674 | 6,033 | 532,641 | 500,902 | 1,033,543 | 1,029,381 | 4,162 | 44,707 | 86,956 | 466,318 | 783,556 | 1,381,537 |
| 16 | Kolába... ... | Rayatwári ... ... ... | 571,562 | 179,781 | 5,339 | 174,442 | 114,238 | 288,680 | 287,142 | 1,538 | 3,722 | 35,776 | 125,976 | 117,408 | 282,882 |
| | | Other Government ... ... | 531,744 | 166,430 | 5,360 | 161,070 | 140,046 | 301,116 | 300,830 | 286 | 152 | 5,226 | 81,506 | 143,744 | 230,628 |
| | | Alienated ... ... ... | 3,466 | 1,148 | 16 | 1,132 | 1,072 | 2,204 | 2,204 | ..... | ..... | 608 | ..... | 654 | 1,262 |
| | | Total ... | 1,106,772 | 347,359 | 10,715 | 336,644 | 255,356 | 592,000 | 590,176 | 1,824 | 3,874 | 41,610 | 207,482 | 261,806 | 514,772 |
| 17 | Ratnágiri ... | Rayatwári ... ... ... | 133,215 | 44,467 | 5,020 | 39,447 | 43,033 | 82,480 | 82,408 | 72 | 325 | 1,712 | 4,726 | 43,972 | 50,735 |
| | | Other Government ... ... | 1,617,915 | 454,226 | 31,358 | 422,868 | 719,258 | 1,142,126 | 1,142,078 | 48 | 562 | 6,181 | 19,271 | 449,775 | 475,789 |
| | | Alienated ... ... ... | 33,724 | 17,910 | 1,644 | 16,266 | 7,374 | 23,640 | 23,640 | ..... | 1 | 964 | ..... | 9,119 | 10,084 |
| | | Total ... | 1,784,854 | 516,603 | 38,022 | 478,581 | 769,665 | 1,248,246 | 1,248,126 | 120 | 888 | 8,857 | 23,997 | 502,866 | 536,608 |
| 18 | Kánara... ... | Rayatwári ... ... ... | 2,435,365 | 246,872 | 12,355 | 234,517 | 80,941 | 315,458 | 314,982 | 476 | 61,229 | 1,428 | 1,858,054 | 199,196 | 2,119,907 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,435,365 | 246,872 | 12,355 | 234,517 | 80,941 | 315,458 | 314,982 | 476 | 61,229 | 1,428 | 1,858,054 | 199,196 | 2,119,907 |
| | Total A ... | Rayatwári ... ... ... | 37,758,275 | 22,071,132 | 471,842 | 21,599,340 | 3,697,338 | 25,296,678 | 25,267,800 | 28,878 | 1,334,211 | 653,471 | 6,030,125 | 4,443,790 | 12,461,597 |
| | | Other Government ... ... | 4,187,508 | 1,516,201 | 58,639 | 1,457,562 | 1,332,797 | 2,790,359 | 2,739,754 | 50,605 | 25,992 | 177,109 | 283,392 | 910,656 | 1,397,149 |
| | | Alienated ... ... ... | 3,222,269 | 2,123,708 | 52,418 | 2,076,290 | 500,523 | 2,576,813 | 2,575,869 | 944 | 107,550 | 55,911 | 71,245 | 410,750 | 645,456 |
| | | Total ... | 45,168,052 | 25,716,091 | 582,899 | 25,133,192 | 5,530,658 | 30,663,850 | 30,583,423 | 80,427 | 1,467,753 | 886,491 | 6,384,762 | 5,765,196 | 14,504,202 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 4,973,692 | 418,148 | 24,725 | 393,423 | 397,961 | 791,384 | 486,392 | 304,992 | 53,222 | 603,709 | 110,678 | 3,414,699 | 4,182,308 |
| 20 | Hyderabad... ... ... ... ... | | 5,669,789 | 848,320 | 15,211 | 833,109 | 1,311,636 | 2,144,745 | 1,641,463 | 503,282 | 343,276 | 1,589,193 | 55,748 | 1,536,827 | 3,525,044 |
| 21 | Shikárpur... ... ... ... ... | | 4,297,714 | 1,073,621 | 163,691 | 909,930 | 625,542 | 1,535,472 | 986,285 | 549,187 | 136,148 | 1,541,354 | 316,521 | 768,219 | 2,762,242 |
| 22 | Upper Sind Frontier ... ... ... | | 817,541 | 186,841 | 10,262 | 176,579 | 340,567 | 517,146 | 202,707 | 314,439 | 32,025 | 110,270 | 48,468 | 109,632 | 300,395 |
| 23 | Thar and Párkar ... ... ... ... | | 8,488,494 | 651,591 | 8,869 | 642,722 | 573,776 | 1,216,498 | 660,597 | 555,901 | ..... | ..... | ..... | 7,271,996 | 7,271,996 |
| | | Total B. ... | 24,247,230 | 3,178,521 | 222,758 | 2,955,763 | 3,249,482 | 6,205,245 | 3,977,444 | 2,227,801 | 564,671 | 3,844,526 | 531,415 | 13,101,373 | 18,041,985 |
| | | Grand Total ... | 69,415,282 | 28,894,612 | 805,657 | 28,088,955 | 8,780,140 | 36,869,095 | 34,560,867 | 2,308,228 | 2,032,424 | 4,731,017 | 6,916,177 | 18,866,569 | 32,546,187 |

A

# III.—Crops, 1889-90.

| No. | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet). Sorghum vulgare, &c. | Bájri (Spiked Millet). Pennisetum Typhoideum. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu). Triticum æstivum. | Barley (Jav, Sátu). Hordeum vulgare. | Maize (Makai), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Elensine coracana. | Rále, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum miliaceum, P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum pilosum. | Amaranth (Rájgira). Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 167,158 | 140,678 | 55,256 | 81,413 | 13,937 | 2,608 | 12,297 | 2,314 | 83 | 4,588 | 6,674 | ..... | 26 | ..... | 487,032 |
| | | Other Government ... ... | 160,062 | 95,081 | 5,634 | 84,026 | 5,405 | 642 | 8,793 | 587 | 325 | 2,844 | 14,354 | ..... | ..... | ..... | 377,753 |
| | | Alienated ... ... ... | 13,251 | 5,556 | 1,396 | 3,767 | 285 | 202 | 109 | 200 | ..... | 1,173 | 624 | ..... | ..... | ..... | 26,563 |
| | | Total ... | 340,471 | 241,315 | 62,286 | 169,206 | 19,627 | 3,452 | 21,199 | 3,101 | 408 | 8,605 | 21,652 | ..... | 26 | ..... | 891,348 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 49,113 | 160,292 | 103,461 | 16,413 | 6,166 | 310 | 82,301 | 7,71 | 340 | 398 | 1,645 | ..... | 90 | 2 | 468,002 |
| | | Other Government ... ... | 13,247 | 47,241 | 12,926 | 1,139 | 392 | 10 | 35,562 | 8,55 | 37 | 263 | 177 | ..... | 24 | 9 | 119,882 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 62,360 | 207,533 | 116,387 | 17,552 | 6,558 | 320 | 117,863 | 56,326 | 377 | 661 | 1,822 | ..... | 114 | 11 | 587,884 |
| 3 | Panch Maháls ... | Rayatwári ... ... ... | 2,915 | 29,689 | 34,926 | 15,066 | 944 | 69,399 | 16,320 | 10,328 | 35 | 1,741 | 12,148 | 108 | 20 | 1,946 | 195,585 |
| | | Other Government ... ... | 2,482 | 8,194 | 11,302 | 1,651 | 405 | 14,253 | 5,774 | 3,512 | ..... | 796 | 2,909 | 486 | ..... | 317 | 52,081 |
| | | Alienated ... ... ... | 286 | 4,166 | 3,938 | 477 | 15 | 3,365 | 2,070 | 1,295 | ..... | 49 | 1,394 | 33 | ..... | 45 | 17,133 |
| | | Total ... | 5,683 | 42,049 | 50,166 | 17,194 | 1,364 | 87,017 | 24,164 | 15,135 | 35 | 2,586 | 16,451 | 627 | 20 | 2,308 | 264,799 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 128,868 | 17,368 | 19,479 | 54,794 | ..... | 9 | 10,049 | 240 | 30 | 249 | 4 | ..... | 21 | 1 | 231,112 |
| | | Other Government ... ... | 197 | 4 | 33 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 259 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 129,065 | 17,372 | 19,512 | 54,819 | ..... | 9 | 10,049 | 240 | 30 | 249 | 4 | ..... | 21 | 1 | 231,371 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 117,685 | 7,934 | 101,738 | 23,299 | ..... | 2 | 31,480 | 13,342 | 1 | 63 | 1,567 | 111 | 2 | 240 | 297,464 |
| | | Other Government ... ... | 1,979 | 15 | 959 | 42 | ..... | ..... | 243 | 91 | ..... | ..... | ..... | ..... | ..... | ..... | 3,329 |
| | | Alienated ... ... ... | 3,029 | 20 | 286 | ..... | ..... | ..... | 112 | 56 | ..... | ..... | ..... | ..... | ..... | ..... | 3,503 |
| | | Total ... | 122,693 | 7,969 | 102,983 | 23,341 | ..... | 2 | 31,835 | 13,489 | 1 | 63 | 1,567 | 111 | 2 | 240 | 304,296 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 550,444 | 706,456 | 14,193 | 207,984 | 4 | 2,778 | 2,191 | 9,086 | 447 | 4,186 | 1,579 | 1,126 | 278 | 29 | 15,00,781 |
| | | Other Government ... ... | 2,683 | 6,064 | 9,678 | 7,871 | ..... | 174 | 2,298 | 2,019 | 14 | 599 | 2,214 | 444 | ..... | 8 | 34,066 |
| | | Alienated ... ... ... | 19,252 | 11,553 | 889 | 3,632 | ..... | 146 | ..... | 308 | ..... | 201 | 47 | 42 | 33 | ..... | 36,103 |
| | | Total ... | 572,379 | 724,073 | 24,760 | 219,487 | 4 | 3,098 | 4,489 | 11,413 | 461 | 4986 | 3,840 | 1,612 | 311 | 37 | 1,570,950 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 141,147 | 759,698 | 44,752 | 308,620 | ..... | 2,878 | 2 | 144,766 | 186 | 45,213 | 713 | 3,202 | 107 | ..... | 1,451,284 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 4,815 | 34,724 | 3,210 | 32,368 | ..... | 90 | ..... | 7,075 | 6 | 1,841 | ..... | 283 | ..... | ..... | 84,412 |
| | | Total ... | 145,962 | 794,422 | 47,962 | 340,988 | ..... | 2,968 | 2 | 151,841 | 192 | 47,054 | 713 | 3,485 | 107 | ..... | 1,535,696 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 863,390 | 880,970 | 12,781 | 215,425 | 121 | 943 | 190 | 29,389 | 1,577 | 13,117 | 9 | 5,488 | 407 | 830 | 2,024,637 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 153,973 | 79,267 | 102 | 22,708 | 14 | 176 | ..... | 2 | 244 | 54 | ..... | 6 | 17 | 26 | 256,589 |
| | | Total ... | 1,017,363 | 960,237 | 12,883 | 238,133 | 135 | 1,119 | 190 | 29,391 | 1,821 | 13,171 | 9 | 5,494 | 424 | 856 | 2,281,226 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 759,427 | 470,477 | 55,679 | 99,112 | 963 | 1,723 | 30 | 55,526 | 2,168 | 34,038 | 110 | 7,149 | 381 | 3,599 | 1,490,382 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 120,721 | 105,632 | 6,744 | 20,980 | 211 | 56 | ..... | 5,813 | 303 | 2,857 | ..... | 627 | 2 | 300 | 264,246 |
| | | Total ... | 880,148 | 576,109 | 62,423 | 120,092 | 1,174 | 1,779 | 30 | 61,339 | 2,471 | 36,895 | 110 | 7,776 | 383 | 3,899 | 1,754,628 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... ... | 1,143,165 | 290,714 | 20,914 | 56,989 | 1,167 | 12,734 | 22 | 63 | 1,369 | 1,480 | ..... | 232 | 56 | 8,233 | 1,537,138 |
| | | Other Government .. ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 86,341 | 25,454 | 850 | 4,052 | 194 | 1,003 | ..... | ..... | 53 | 71 | ..... | ..... | 1 | 759 | 118,778 |
| | | Total ... | 1,229,506 | 316,168 | 21,764 | 61,041 | 1,361 | 13,737 | 22 | 63 | 1,422 | 1,551 | ..... | 232 | 57 | 8,992 | 1,655,916 |
| 11 | Sátára ... ... | Rayatwári ... ... ... | 429,006 | 505,568 | 29,149 | 58,711 | 4,317 | 7,927 | 167 | 53,212 | 22,330 | 39,911 | 12 | ..... | 472 | 1,783 | 1,152,565 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 92,865 | 83,129 | 12,021 | 13,389 | 928 | 2,065 | ..... | 16,568 | 8,179 | 12,374 | ..... | ..... | 284 | 412 | 242,214 |
| | | Total ... | 521,871 | 588,697 | 41,170 | 72,100 | 5,245 | 9,992 | 167 | 69,780 | 30,509 | 52,285 | 12 | ..... | 756 | 2,195 | 1,394,779 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 615,645 | 89,246 | 103,937 | 106,008 | 313 | 5,646 | 164 | 48,266 | 59,718 | 26,220 | 61 | ..... | 14 | 1 | 1,055,339 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 157,685 | 32,724 | 8,286 | 18,825 | 41 | 1,440 | 15 | 7,477 | 11,461 | 5,006 | 18 | ..... | ..... | 21 | 242,999 |
| | | Total ... | 773,330 | 121,970 | 112,223 | 124,833 | 354 | 7,086 | 179 | 55,843 | 71,179 | 31,226 | 79 | ..... | 14 | 22 | 1,298,338 |
| 13 | Bijápur ... | Rayatwári ... ... ... | 1,159,144 | 326,835 | 10,698 | 166,588 | 9 | 592 | 38 | 116 | 24,077 | 6,572 | ..... | ..... | 3 | 7 | 1,694,679 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 140,491 | 28,770 | 699 | 16,264 | 7 | 132 | ..... | 11 | 4,398 | 819 | ..... | ..... | ..... | ..... | 191,591 |
| | | Total ... | 1,299,635 | 355,605 | 11,397 | 182,852 | 16 | 724 | 38 | 127 | 28,475 | 7,391 | ... | ..... | 3 | 7 | 1,886,270 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 561,465 | 4,987 | 137,537 | 272,047 | 22 | 29 | 33 | 42,442 | 86,381 | 30,257 | ..... | ..... | ..... | ..... | 1,135,200 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 35,004 | 414 | 17,338 | 10,459 | ..... | 3 | ..... | 4,498 | 5,561 | 2,333 | ..... | ..... | ..... | ..... | 75,610 |
| | | Total ... | 596,469 | 5,401 | 154,875 | 282,506 | 22 | 32 | 33 | 46,940 | 91,942 | 32,590 | ... | ..... | ... | ..... | 1,210,810 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári ... ... ... | 30 | ..... | 327,515 | 143 | ..... | 86 | 13,825 | 73,618 | ..... | 33,282 | ..... | ..... | ..... | ..... | 448,499 |
| | | Other Government ... ... | ..... | ..... | 1,807 | ..... | ..... | ..... | ..... | 110 | ..... | 83 | ..... | ..... | ..... | ..... | 2,000 |
| | | Alienated ... ... ... | ..... | ..... | 7,462 | ..... | ..... | ..... | 21 | 346 | ..... | 170 | ..... | ..... | ..... | ..... | 7,999 |
| | | Total ... | 30 | ..... | 336,784 | 143 | ..... | 86 | 13,846 | 74,074 | ..... | 33,535 | ... | ..... | ... | ..... | 458,498 |
| 16 | Kolába... ... | Rayatwári ... ... ... | ..... | ..... | 139,306 | ..... | ..... | ..... | 2,497 | 13,177 | ..... | 10,897 | ..... | ..... | ..... | ..... | 165,877 |
| | | Other Government ... ... | ..... | ..... | 56,829 | ..... | ..... | ..... | 16,081 | 42,652 | ..... | 33,649 | ..... | ..... | ..... | ..... | 149,211 |
| | | Alienated ... ... ... | ..... | ..... | 963 | ..... | ..... | ..... | ..... | 75 | ..... | 77 | ..... | ..... | ..... | ..... | 1,115 |
| | | Total ... | ..... | ..... | 197,098 | ..... | ..... | ..... | 18,578 | 55,904 | ..... | 44,623 | ... | ..... | ... | ..... | 316,203 |
| 17 | Ratnágiri ... | Rayatwári ... ... ... | ..... | ..... | 13,317 | ..... | ..... | ..... | 7,115 | 8,720 | ..... | 4,717 | ..... | ..... | ..... | ..... | 33,869 |
| | | Other Government ... ... | ..... | ..... | 118,101 | ..... | ..... | ..... | 90,093 | 95,570 | 2 | 69,654 | ..... | ..... | ..... | 98 | 373,518 |
| | | Alienated ... ... ... | ..... | ..... | 4,937 | ..... | ..... | ..... | 2,744 | 3,838 | ..... | 2,769 | ..... | ..... | ..... | ..... | 14,288 |
| | | Total ... | ..... | ..... | 136,355 | ..... | ..... | ..... | 99,952 | 108,128 | 2 | 77,140 | ... | ..... | ... | 98 | 421,675 |
| 18 | Kánara... ... | Rayatwári ... ... ... | 923 | ..... | 193,457 | ..... | ..... | 8 | ..... | 6,062 | 108 | 360 | ..... | ..... | ..... | ..... | 200,918 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 923 | ..... | 193,457 | ..... | ..... | 8 | ..... | 6,062 | 108 | 360 | ... | ..... | ... | ..... | 200,918 |
| | Total A. ... | Rayatwári ... ... ... | 6,689,525 | 4,390,912 | 1,418,095 | 1,682,612 | 27,963 | 107,672 | 178,721 | 558,238 | 198,850 | 257,289 | 24,522 | 17,416 | 1,877 | 16,671 | 15,570,363 |
| | | Other Government ... ... | 180,650 | 156,599 | 217,269 | 94,754 | 6,202 | 15,079 | 158,844 | 153,396 | 378 | 107,888 | 19,654 | 930 | 24 | 432 | 1,112,099 |
| | | Alienated ... ... ... | 827,713 | 411,409 | 69,121 | 146,921 | 1,695 | 8,678 | 5,071 | 47,562 | 30,205 | 29,794 | 2,083 | 991 | 337 | 1,563 | 1,583,143 |
| | | Total ... | 7,697,888 | 4,958,920 | 1,704,485 | 1,924,287 | 35,860 | 131,429 | 342,636 | 759,196 | 229,433 | 394,971 | 46,259 | 19,337 | 2,238 | 18,666 | 18,265,605 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 66,398 | 32,199 | 172,144 | 42,259 | 17,533 | 746 | ... | 1,566 | 34 | 63 | ... | ... | ... | ... | 332,992 |
| 20 | Hyderabad... ... ... .. ... | | 118,560 | 277,564 | 163,745 | 44,103 | 5,935 | 350 | ... | 51 | 15 | 389 | ... | ... | ... | 1 | 610,713 |
| 21 | Shikárpur ... ... ... ... ... | | 299,138 | 20,101 | 218,176 | 252,971 | 3,003 | 15 | ... | 43 | 789 | 11 | ... | ... | ... | 596 | 794,843 |
| 22 | Upper Sind Frontier ... ... ... | | 94,263 | 8,418 | 12,461 | 15,592 | 194 | 8 | ... | ... | 537 | 145 | ... | ... | ... | ... | 131,618 |
| 23 | Thar and Párkár ... ... ... ... | | 6,629 | 430,104 | 90,018 | 32,346 | 475 | ... | ... | ... | ... | 26 | ... | ... | ... | ... | 559,598 |
| | | Total B. ... | 584,988 | 768,386 | 656,544 | 387,271 | 27,190 | 1,119 | ... | 1,660 | 1,375 | 634 | ... | ... | ... | 597 | 2,429,764 |
| | | Grand Total ... | 8,282,876 | 5,727,306 | 2,361,029 | 2,311,558 | 63,050 | 132,548 | 342,636 | 760,856 | 230,808 | 395,605 | 46,259 | 19,337 | 2,238 | 19,263 | 20,695,369 |

## III—Crops, 1889-90—*continued.*

| No. | District. | | II.—Pulses. | | | | | | | | | | | | | | III.—Orchard and Garden Produce. | | | | | IV.—Drugs and Narcotics. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur (Pigeon Pea), Cajanus Indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram), Phaseolus radiatus. | Math (Kidney Bean), Phaseolus aconitifolius. | Val (large fruited Dolichos), Dolichos lablab. | Chavli (small fruited Dolichos), Dolichos catiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lákh Láng), Lathyrus sativus. | Field Vetch (Guvár), Cyamopsis psoralioides. | Others. | Total II. | A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | Tobacco (Tambákhu), Nicotiana tabacum. | Bháng, Gánja (Indian Hemp), Cannabis sativa. | Opium (Afu), Papaver somniferum. | Coffee (Káfi, Bund), Coffee Arabica. | Tea (Chaha), Thea sinensis. | Cinchona, Chinchona officinalis. | Others. | Total IV. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 1,674 | 4,846 | 4,340 | 1,885 | 25,998 | 54 | 313 | 68 | ... | ... | ... | 3,392 | ... | 42,570 | 536 | 2,030 | 293 | 1,057 | 3,916 | 2,215 | ... | ... | ... | ... | ... | ... | 2,215 |
| | | Other Government | 283 | 6,126 | 5,899 | 2,919 | 16,786 | 25 | 634 | 4,536 | ... | ... | ... | 2,834 | ... | 40,042 | 302 | 761 | 3,916 | 150 | 5,129 | 324 | ... | ... | ... | ... | ... | ... | 324 |
| | | Alienated ... | ... | 303 | 553 | 185 | 641 | 20 | 10 | 750 | ... | ... | ... | 85 | ... | 2,547 | ... | 52 | 20 | 26 | 98 | 9 | ... | ... | ... | ... | ... | ... | 9 |
| | | Total ... | 1,957 | 11,275 | 10,792 | 4,989 | 43,425 | 99 | 957 | 5,354 | ... | ... | ... | 6,311 | ... | 85,159 | 838 | 2,843 | 4,229 | 1,233 | 9,143 | 2,548 | ... | ... | ... | ... | ... | ... | 2,548 |
| 2 | Kaira ... | Rayatwári ... | 17,923 | 3,758 | 3,226 | 695 | 23,334 | 563 | 4,119 | ... | ... | ... | ... | 8,526 | ... | 62,149 | 460 | 855 | 4,880 | 168 | 6,363 | 7,875 | ... | ... | ... | ... | ... | ... | 7,875 |
| | | Other Government | 8,504 | 627 | 455 | 122 | 5,493 | 184 | 154 | ... | ... | ... | ... | 3,392 | ... | 18,931 | 166 | 292 | 750 | 69 | 1,277 | 11,111 | ... | ... | ... | ... | ... | ... | 11,111 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 26,427 | 4,385 | 3,681 | 817 | 28,827 | 752 | 4,273 | ... | ... | ... | ... | 11,918 | ... | 81,080 | 626 | 1,147 | 5,630 | 237 | 7,640 | 18,986 | ... | ... | ... | ... | ... | ... | 18,986 |
| 3 | Panch Maháls ... | Rayatwári ... | 3,846 | 42,305 | 2,161 | 4,808 | 1,767 | 50 | 115 | 33 | 666 | ... | ... | 755 | ... | 56,506 | 120 | 192 | 394 | 20 | 726 | 522 | ... | ... | ... | ... | ... | ... | 522 |
| | | Other Government | 1,686 | 6,839 | 877 | 1,611 | 1,051 | 98 | 367 | ... | 1,048 | ... | ... | 171 | ... | 13,748 | 85 | 30 | 31 | 2 | 148 | 185 | ... | ... | ... | ... | ... | ... | 185 |
| | | Alienated ... | 825 | 1,458 | 381 | 227 | 849 | 17 | 111 | ... | 60 | ... | ... | 128 | ... | 4,056 | ... | 4 | 58 | 1 | 63 | 20 | ... | ... | ... | ... | ... | ... | 20 |
| | | Total ... | 6,357 | 50,602 | 3,419 | 6,646 | 3,667 | 165 | 593 | 33 | 1,774 | ... | ... | 1,054 | ... | 74,310 | 205 | 226 | 483 | 23 | 937 | 727 | ... | ... | ... | ... | ... | ... | 727 |
| 4 | Broach ... | Rayatwári ... | 17,803 | 1,426 | 267 | 11 | 2,988 | 932 | 262 | ... | 814 | ... | 37,338 | 304 | 2 | 62,147 | 249 | 1,614 | 22,617 | 357 | 24,837 | 2,918 | ... | ... | ... | ... | ... | ... | 2,918 |
| | | Other Government | 28 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 138 | ... | ... | 166 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 17,831 | 1,426 | 267 | 11 | 2,988 | 932 | 262 | ... | 814 | ... | 37,476 | 304 | 2 | 62,313 | 249 | 1,614 | 22,617 | 357 | 24,837 | 2,918 | ... | ... | ... | ... | ... | ... | 2,918 |
| 5 | Surat ... | Rayatwári ... | 26,805 | 2,304 | 3,520 | 2,488 | 404 | 40,599 | 809 | ... | 2,332 | 6 | 3,621 | 2,196 | ... | 85,084 | 416 | 1,988 | ... | 773 | 3,177 | 805 | 17 | ... | ... | ... | ... | ... | 822 |
| | | Other Government | 249 | 2 | 41 | ... | ... | 388 | 1 | ... | 15 | ... | 26 | 38 | ... | 760 | 1 | 21 | ... | 2 | 24 | 8 | ... | ... | ... | ... | ... | ... | 8 |
| | | Alienated ... | 27 | ... | 19 | 17 | 1 | 31 | 2 | ... | ... | ... | 10 | 5 | ... | 112 | ... | 4 | ... | 1 | 5 | 5 | ... | ... | ... | ... | ... | ... | 5 |
| | | Total ... | 27,081 | 2,306 | 3,580 | 2,505 | 405 | 41,018 | 812 | ... | 2,347 | 6 | 3,657 | 2,239 | ... | 85,956 | 417 | 2,013 | ... | 776 | 3,206 | 818 | 17 | ... | ... | ... | ... | ... | 835 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 54,042 | 29,667 | 5,356 | 20,273 | 2,643 | 174 | 894 | 58,858 | 2,215 | 734 | 160 | ... | ... | 175,021 | 1,653 | 3,287 | 270 | 2,775 | 7,985 | 3,321 | 54 | ... | ... | ... | ... | ... | 3,375 |
| | | Other Government | 1,837 | 4,579 | 1 | 499 | ... | ... | ... | 240 | 14 | 4 | ... | ... | ... | 7,174 | 4 | 10 | ... | 8 | 22 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| | | Alienated ... | 1,923 | 1,543 | 94 | 532 | 55 | 5 | 10 | 236 | 53 | 7 | ... | ... | ... | 4,458 | 354 | 266 | 2 | 295 | 917 | 144 | ... | ... | ... | ... | ... | ... | 144 |
| | | Total ... | 57,802 | 35,789 | 5,451 | 21,309 | 2,698 | 179 | 904 | 59,334 | 2,282 | 745 | 160 | ... | ... | 186,653 | 2,011 | 3,563 | 272 | 3,078 | 8,924 | 3,466 | 54 | ... | ... | ... | ... | ... | 3,520 |
| 7 | Násik ... | Rayatwári ... | 23,643 | 63,011 | 992 | 21,961 | 1,150 | 10 | 113 | 67,246 | 1,930 | 8,252 | 3,146 | ... | ... | 191,454 | 3,438 | 2,922 | 533 | 1,855 | 8,748 | 856 | 10 | ... | ... | ... | ... | ... | 866 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,590 | 5,392 | 6 | 650 | 3 | 7 | ... | 2,436 | 174 | 1,118 | 286 | ... | ... | 11,662 | 840 | 296 | 82 | 143 | 1,361 | 81 | ... | ... | ... | ... | ... | ... | 81 |
| | | Total ... | 25,233 | 68,403 | 998 | 22,611 | 1,153 | 17 | 113 | 69,682 | 2,104 | 9,370 | 3,432 | ... | ... | 203,116 | 4,278 | 3,218 | 615 | 1,998 | 10,109 | 937 | 10 | ... | ... | ... | ... | ... | 947 |
| 8 | Ahmadnagar ... | Rayatwári ... | 35,834 | 89,916 | 8,025 | 1,901 | 17,210 | 848 | 78 | 35,942 | 1,057 | 429 | 134 | ... | 39 | 191,413 | 1,904 | 1,141 | 1,477 | 1,946 | 6,468 | 3,218 | 674 | ... | ... | ... | ... | ... | 3,892 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 5,243 | 16,440 | 438 | ... | 1,750 | 3 | ... | 4,686 | ... | ... | ... | ... | ... | 28,560 | 167 | 89 | 136 | 130 | 522 | 432 | 156 | ... | ... | ... | ... | ... | 588 |
| | | Total ... | 41,077 | 1,06,356 | 8,463 | 1,901 | 18,960 | 851 | 78 | 40,628 | 1,057 | 429 | 134 | ... | 39 | 219,973 | 2,071 | 1,230 | 1,613 | 2,076 | 6,990 | 3,650 | 830 | ... | ... | ... | ... | ... | 4,480 |
| 9 | Poona ... | Rayatwári ... | 17,699 | 68,218 | 1,682 | 3,437 | 18,992 | 4,668 | 286 | 23,536 | 1,423 | 1,270 | ... | ... | ... | 141,211 | 11,018 | 1,695 | 3,014 | 2,960 | 18,687 | 714 | 2 | ... | ... | ... | ... | ... | 716 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 5,339 | 14,357 | 154 | 1,100 | 2,063 | 583 | 8 | 4,772 | 626 | 112 | ... | ... | ... | 29,114 | 1,737 | 397 | 352 | 666 | 3,152 | 12 | ... | ... | ... | ... | ... | ... | 12 |
| | | Total ... | 23,038 | 82,575 | 1,836 | 4,537 | 21,055 | 5,251 | 294 | 28,308 | 2,049 | 1,382 | ... | ... | ... | 170,325 | 12,755 | 2,092 | 3,366 | 3,626 | ,839 | 726 | 2 | ... | ... | ... | ... | ... | 728 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 76,290 | 62,848 | 5,678 | 856 | 40,777 | 69 | 29 | 15,978 | 47 | 70 | 381 | ... | 10 | 203,033 | 2,776 | 1,384 | 677 | 1,518 | 6,355 | 2,636 | 57 | ... | ... | ... | ... | ... | 2,692 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 3,319 | 4,769 | 154 | 3 | 3,317 | 3 | ... | 1,697 | 3 | 4 | 15 | ... | ... | 13,284 | 155 | 70 | 29 | 70 | 324 | 134 | ... | ... | ... | ... | ... | ... | 134 |
| | | Total | 79,609 | 67,617 | 5,832 | 859 | 44,094 | 72 | 29 | 17,675 | 50 | 74 | 396 | ... | 10 | 216,317 | 2,931 | 1,454 | 706 | 1,588 | 6,679 | 2,770 | 57 | ... | ... | ... | ... | ... | 2,827 |
| 11 | Sátára | Rayatwári | 53,245 | 79,649 | 10,005 | 24,004 | 57,426 | 3,602 | 381 | 40,729 | 1,083 | 421 | ... | ... | 1 | 270,546 | 4,389 | 846 | 965 | 1,323 | 7,523 | 6,375 | 362 | ... | 12 | ... | ... | ... | 6,749 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 12,036 | 17,032 | 2,929 | 7,777 | 7,983 | 397 | 51 | 7,509 | 362 | 129 | ... | ... | ... | 56,705 | 1,241 | 261 | 262 | 354 | 2,118 | 653 | 6 | ... | ... | ... | ... | ... | 659 |
| | | Total | 65,281 | 96,681 | 12,934 | 31,781 | 65,409 | 4,499 | 432 | 48,238 | 1,445 | 550 | ... | ... | 1 | 327,251 | 5,630 | 1,107 | 1,227 | 1,677 | 9,641 | 7,028 | 368 | ... | 12 | ... | ... | ... | 7,408 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 45,714 | 43,059 | 4,812 | 3,712 | 3,199 | 5,928 | 197 | 37,673 | 5,340 | 4,835 | ... | ... | ... | 154,469 | 2,764 | 1,655 | 118 | 2,332 | 6,869 | 18,487 | 2 | ... | 58 | ... | ... | ... | 18,547 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 12,622 | 11,794 | 2,602 | 470 | 1,143 | 969 | 32 | 9,664 | 298 | 445 | ... | ... | ... | 40,039 | 1,034 | 439 | 321 | 535 | 2,329 | 4,070 | ... | ... | 17 | ... | ... | ... | 4,087 |
| | | Total | 58,336 | 54,853 | 7,414 | 4,182 | 4,342 | 6,897 | 229 | 47,337 | 5,638 | 5,280 | ... | ... | ... | 194,508 | 3,798 | 2,094 | 439 | 2,867 | 9,198 | 22,557 | 2 | ... | 75 | ... | ... | ... | 22,634 |
| 13 | Bijápur | Rayatwári | 98,199 | 49,228 | 38,423 | 2 | 10,698 | 3,631 | 3,511 | 29,440 | 34 | ... | ... | ... | ... | 233,166 | 1,045 | 1,200 | 129 | 2,359 | 4,733 | 1,932 | 1 | ... | ... | ... | ... | ... | 1,933 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 12,969 | 4,190 | 4,753 | ... | 1,037 | 581 | 595 | 4,707 | 10 | ... | ... | ... | ... | 28,842 | 141 | 100 | 35 | 342 | 618 | 109 | ... | ... | ... | ... | ... | ... | 109 |
| | | Total | 111,168 | 53,418 | 43,176 | 2 | 11,735 | 4,212 | 4,106 | 34,147 | 44 | ... | ... | ... | ... | 262,008 | 1,186 | 1,300 | 164 | 2,701 | 5,351 | 2,041 | 1 | .. | ... | ... | ... | ... | 2,042 |
| 14 | Dhárwár | Rayatwári | 46,534 | 46,878 | 36,168 | 4,675 | 8,767 | 5,393 | 796 | 42,387 | 573 | 94 | ... | ... | ... | 192,265 | 1,862 | 3,311 | 2 | 4,043 | 9,218 | 955 | ... | ... | ... | ... | ... | ... | 955 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 3,087 | 1,851 | 2,252 | 243 | 437 | 396 | 69 | 2,668 | 77 | 1 | ... | ... | ... | 11,081 | 88 | 383 | ... | 425 | 896 | 30 | ... | ... | ... | ... | ... | ... | 30 |
| | | Total | 49,621 | 48,729 | 38,420 | 4,918 | 9,204 | 5,789 | 865 | 45,055 | 650 | 95 | ... | ... | ... | 203,346 | 1,950 | 3,694 | 2 | 4,468 | 10,114 | 985 | ... | ... | ... | ... | ... | ... | 985 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 7,756 | 2,828 | 630 | 21,637 | ... | 4,252 | 4,379 | 1,796 | 143 | ... | 100 | ... | ... | 43,521 | 925 | 883 | 51 | 3,104 | 4,963 | 7 | ... | ... | ... | ... | ... | ... | 7 |
| | | Other Government | ... | 1 | ... | 33 | ... | 9 | ... | ... | ... | ... | ... | ... | ... | 43 | ... | 11 | ... | 129 | 140 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 58 | ... | ... | 112 | ... | 4 | ... | ... | ... | ... | ... | ... | ... | 174 | 23 | 29 | 2 | 202 | 256 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 7,814 | 2,829 | 630 | 21,782 | ... | 4,265 | 4,379 | 1,796 | 143 | ... | 100 | ... | ... | 43,738 | 948 | 923 | 53 | 3,435 | 5,359 | 7 | ... | ... | ... | ... | ... | ... | 7 |
| 16 | Kolába | Rayatwári | 487 | 2,422 | 901 | 1,234 | 9 | 4,038 | 48 | 10 | ... | ... | ... | ... | ... | 9,149 | 73 | 320 | ... | 2,228 | 2,621 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government | 1,548 | 420 | 1,448 | 5,742 | ... | 3,077 | 49 | ... | ... | ... | ... | ... | ... | 12,284 | 7 | 122 | ... | 4 | 133 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | 17 | ... | ... | ... | 16 | ... | ... | ... | ... | ... | ... | ... | 33 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 2,035 | 2,859 | 2,349 | 6,976 | 9 | 7,131 | 97 | 10 | ... | ... | ... | ... | ... | 21,466 | 80 | 442 | ... | 2,232 | 2,754 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri | Rayatwári | ... | ... | 23 | 791 | ... | 405 | 18 | 2,315 | ... | ... | ... | ... | ... | 3,552 | ... | 2 | ... | 3,710 | 3,712 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government | 295 | 92 | 845 | 8,220 | ... | 9,627 | 287 | 8,586 | ... | ... | ... | ... | ... | 29,952 | 295 | 564 | ... | 19,942 | 20,801 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 31 | ... | 306 | 385 | ... | 106 | 8 | 1,060 | ... | ... | ... | ... | ... | 1,896 | ... | 16 | ... | 254 | 270 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 2,326 | 92 | 1,174 | 9,396 | ... | 10,138 | 313 | 11,961 | ... | ... | ... | ... | ... | 35,400 | 295 | 582 | ... | 23,906 | 24,783 | ... | ... | ... | ... | ... | ... | ... | ... |
| 18 | Kánara | Rayatwári | 111 | 305 | 1,258 | 1,732 | ... | 99 | 633 | 1,963 | 469 | ... | ... | ... | 50 | 6,620 | 273 | 552 | 4,307 | 17,567 | 22,699 | ... | ... | ... | 27 | ... | ... | ... | 27 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 111 | 305 | 1,258 | 1,732 | ... | 99 | 633 | 1,963 | 469 | ... | ... | ... | 50 | 6,620 | 273 | 552 | 4,307 | 17,567 | 22,699 | ... | ... | ... | 27 | .. | ... | ... | 27 |
| | Total A | Rayatwári | 527,605 | 592,668 | 127,467 | 116,107 | 215,362 | 75,320 | 16,981 | 357,974 | 18,126 | 16,111 | 44,880 | 15,173 | 102 | 2,123,876 | 33,901 | 25,877 | 39,727 | 50,095 | 149,600 | 52,836 | 1,179 | ... | 97 | ... | ... | ... | 54,112 |
| | | Other Government | 16,430 | 18,686 | 9,566 | 19,146 | 23,330 | 13,408 | 1,492 | 13,362 | 1,077 | 4 | 164 | 6,435 | ... | 123,100 | 860 | 1,811 | 4,697 | 20,306 | 27,674 | 11,629 | ... | ... | ... | ... | ... | ... | 11,629 |
| | | Alienated | 59,069 | 79,146 | 14,641 | 11,701 | 19,279 | 3,638 | 896 | 40,185 | 1,663 | 1,816 | 311 | 218 | ... | 232,563 | 5,780 | 2,406 | 1,299 | 3,444 | 12,929 | 5,699 | 162 | ... | 17 | ... | ... | ... | 5,878 |
| | | Total | 603,104 | 690,500 | 151,674 | 146,954 | 257,971 | 92,366 | 19,369 | 411,521 | 20,866 | 17,931 | 45,355 | 21,826 | 102 | 2,479,539 | 40,541 | 30,094 | 45,723 | 73,845 | 190,203 | 70,164 | 1,341 | ... | 114 | ... | ... | ... | 71,619 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | ... | 1,597 | 11,442 | 2,031 | 1,041 | ... | 21 | ... | ... | ... | 7,536 | ... | ... | 23,668 | 1,592 | 2,217 | 7,833 | 2,003 | 13,645 | 298 | 116 | ... | ... | ... | ... | ... | 414 |
| 20 | Hyderabad | | ... | 2,723 | 3,946 | 26 | ... | ... | 1,521 | ... | ... | ... | 11,511 | 68 | 69 | 19,864 | 2,115 | 4,395 | 14,774 | 4,209 | 25,493 | 4,553 | 18 | ... | ... | 2 | ... | 19 | 4,592 |
| 21 | Shikárpur | | ... | 16,041 | 995 | 856 | ... | ... | 8 | ... | ... | ... | 69,420 | ... | 48 | 87,368 | 1,959 | 6,548 | 1,099 | 3,848 | 13,454 | 3,175 | 297 | ... | ... | ... | ... | 10 | 3,482 |
| 22 | Upper Sind Frontier | | ... | 2,198 | 773 | 45 | ... | ... | 131 | ... | 6,767 | ... | ... | ... | 479 | 10,393 | 109 | 1,141 | 4 | 58 | 1,312 | 95 | ... | ... | ... | ... | ... | ... | 95 |
| 23 | Thar and Párkar | | ... | ... | 5,024 | ... | ... | ... | 483 | ... | ... | ... | ... | 4 | ... | 5,511 | 267 | 187 | 388 | 94 | 936 | 120 | ... | ... | ... | ... | ... | ... | 120 |
| | | Total B | ... | 22,559 | 22,180 | 2,958 | 1,041 | ... | 2,164 | ... | 6,767 | ... | 88,467 | 72 | 596 | 146,804 | 6,042 | 14,488 | 24,098 | 10,212 | 54,840 | 8,241 | 431 | ... | ... | 2 | ... | 29 | 8,703 |
| | | Grand Total | 603,104 | 713,059 | 173,854 | 149,912 | 259,012 | 92,366 | 21,533 | 411,521 | 27,633 | 17,931 | 133,822 | 21,898 | 698 | 2,626,343 | 46,583 | 44,582 | 69,821 | 84,057 | 245,043 | 78,405 | 1,772 | ... | 114 | 2 | ... | 29 | 80,322 |

# III.—Crops, 1889-90—*continued.*

| No. | District. | | V.—Condiments and Spices. | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cardamon (Veldode), Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (A'le), Zingiber Officinale. | Black Pepper (Miri), Piper nigrum. | Betel-leaves (Páne), Piper-betel. | Betelnut (Supári), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bálant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jíre), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Rái), Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us, Sherdi), Saccharum officinarum. | Others. | Total VII. |
| | 1 | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | ... | 1,736 | 262 | ... | ... | ... | 5 | 78 | 2 | ... | 3 | ... | 361 | 6 | 41 | .. | 2,494 | ... | ... | ... | 737 | ... | 737 |
| | | Other Government ... ... | ... | 469 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 469 | ... | ... | ... | 734 | ... | 734 |
| | | Alienated ... ... ... | ... | 33 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 33 | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 2,238 | 262 | ... | ... | ... | 5 | 78 | 2 | ... | 3 | ... | 361 | 6 | 41 | ... | 2,996 | ... | ... | ... | 1,471 | ... | 1,471 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | ... | 773 | 63 | ... | ... | ... | 10 | 73 | ... | ... | 434 | ... | 84 | 35 | 72 | 134 | 1,678 | ... | ... | ... | 271 | ... | 271 |
| | | Other Government ... ... | ... | 247 | 33 | ... | ... | ... | ... | ... | ... | ... | 1,053 | ... | 11 | ... | 59 | 21 | 1,424 | ... | ... | ... | 274 | ... | 274 |
| | | Alienated ... ... ... | ... | ..... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 1,020 | 96 | ... | ... | ... | 10 | 73 | ... | ... | 1,487 | ... | 95 | 35 | 131 | 155 | 3,102 | ... | ... | ... | 545 | ... | 545 |
| 3 | Panch Maháls... | Rayatwári ... ... ... | ... | 445 | 11 | ... | ... | ... | ... | ... | 13 | ... | 37 | ... | 24 | ... | 7 | ... | 537 | ... | ... | ... | 159 | ... | 159 |
| | | Other Government ... ... | ... | 236 | 1 | ... | ... | ... | ... | ... | ... | 4 | ... | ... | 30 | ... | 52 | ... | 323 | ... | ... | ... | 25 | ... | 25 |
| | | Alienated ... ... ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 6 | ... | 6 |
| | | Total ... | ... | 682 | 12 | ... | ... | ... | ... | ... | 13 | 4 | 37 | ... | 54 | ... | 59 | ... | 861 | ... | ... | ... | 190 | ... | 190 |
| 4 | Broach ... ... | Rayatwári ... ... ... | ... | 210 | 20 | ... | ... | ... | 17 | ... | 11 | 46 | ... | ... | 17 | 9 | 34 | 1 | 365 | ... | ... | ... | 143 | ... | 143 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | ... | 210 | 20 | ... | ... | ... | 17 | ... | 11 | 46 | ... | ... | 17 | 9 | 34 | 1 | 365 | ... | ... | ... | 143 | ... | 143 |
| 5 | Surat ... ... | Rayatwári ... ... ... | ... | 735 | 99 | ... | ... | ... | 72 | ... | 2 | 6 | ... | 38 | 184 | 82 | 111 | 19 | 1,348 | ... | ... | ... | 4,360 | ... | 4,360 |
| | | Other Government .. ... | ... | 26 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | 27 | ... | ... | .. | 67 | ... | 67 |
| | | Alienated ... ... ... | ... | 35 | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 38 | ... | ... | ... | 11 | ... | 11 |
| | | Total ... | ... | 796 | 101 | ... | ... | ... | 74 | ... | 2 | 6 | ... | 38 | 184 | 82 | 111 | 19 | 1,413 | ... | ... | ... | 4,438 | ... | 4,438 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | ... | 8,095 | 11 | ... | 226 | ... | 81 | 873 | 4,017 | 9,444 | ... | 1,685 | 172 | 152 | 111 | ... | 24,867 | ... | ... | ... | 1,755 | ... | 1,755 |
| | | Other Government ... ... | ... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... .. | ... | 131 | ... | ... | 5 | ... | 41 | 35 | 85 | 61 | ... | 32 | 6 | 76 | 40 | ... | 512 | ... | ... | ... | 82 | ... | 82 |
| | | Total ... | ... | 8,234 | 11 | ... | 231 | ... | 122 | 908 | 4,102 | 9,505 | ... | 1,717 | 178 | 228 | 151 | ... | 25,387 | ... | ... | ... | 1,837 | ... | 1,837 |
| 7 | Násik ... ... | Rayatwári ... ... ... | ... | 4,515 | 10 | ... | 140 | 1 | 34 | 8 | ... | 5 | ... | 1 | 701 | 2 | 383 | ... | 5,800 | ... | ... | ... | 7,281 | ... | 7,281 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 397 | 2 | ... | 27 | ... | ... | ... | ... | ... | ... | ... | 493 | ... | 33 | ... | 952 | ... | ... | ... | 759 | ... | 759 |
| | | Total ... | ... | 4,912 | 12 | ... | 167 | 1 | 34 | 8 | ... | 5 | ... | 1 | 1,194 | 2 | 416 | ... | 6,752 | ... | ... | ... | 8,040 | ... | 8,040 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | ... | 5,719 | ... | ... | 368 | ... | ... | ... | ... | 6 | ... | ... | 6 | 15 | 129 | ... | 6,243 | ... | ... | ... | 2,816 | ... | 2,816 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 707 | ... | ... | 30 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 5 | ... | 743 | ... | ... | ... | 161 | ... | 161 |
| | | Total ... | ... | 6,426 | ... | ... | 398 | 1 | ... | ... | ... | 6 | ... | ... | 6 | 15 | 134 | ... | 6,986 | ... | ... | ... | 2,977 | ... | 2,977 |
| 9 | Poona ... ... | Rayatwári ... ... ... | ... | 8,575 | 33 | ... | 380 | ... | 27 | 25 | ... | 348 | ... | ... | 2 | 4 | 788 | 30 | 10,212 | 2 | ... | 2 | 6,721 | ... | 6,721 |
| | | Other Government ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... ... ... | ... | 1,530 | ... | ... | 498 | ... | 3 | ... | ... | 14 | ... | ... | ... | ... | 149 | ... | 2,194 | 3 | ... | 3 | 827 | ... | 827 |
| | | Total ... | ... | 10,105 | 33 | ... | 878 | ... | 30 | 25 | ... | 362 | ... | ... | 2 | 4 | 937 | 30 | 12,406 | 5 | ... | 5 | 7,548 | ... | 7,548 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | ... | 8,415 | ... | ... | 273 | ... | 690 | ... | ... | 168 | ... | 54 | ... | ... | 81 | ... | 9,681 | .. | ... | ... | 3,001 | ... | 3,001 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 524 | ... | ... | ... | 2 | ... | ... | ... | 29 | ... | ... | 1 | ... | ... | ... | 556 | ... | ... | ... | 187 | .. | 187 |
| | | Total | ... | 8,939 | ... | ... | 273 | 2 | 690 | ... | ... | 197 | ... | 54 | 1 | ... | 81 | ... | 10,237 | ... | ... | ... | 3,188 | ... | 3,188 |
| 11 | Sátára | Rayatwári | ... | 10,983 | 25 | ... | 332 | 6 | 1,772 | 119 | ... | 625 | ... | 37 | 41 | ... | 562 | 1 | 14,503 | ... | ... | ... | 9,786 | ... | 9,786 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 2,972 | 47 | ... | 72 | ... | 573 | 17 | ... | 194 | ... | 7 | ... | ... | 87 | ... | 3,969 | ... | ... | ... | 2,846 | ... | 2,846 |
| | | Total | ... | 13,955 | 72 | ... | 404 | 6 | 2,345 | 136 | ... | 819 | ... | 44 | 41 | ... | 649 | 1 | 18,472 | ... | ... | ... | 12,632 | ... | 12,632 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | ... | 14,534 | ... | ... | 84 | ... | 217 | 44 | ... | 1,240 | ... | ... | 150 | 148 | 1,060 | ... | 17,477 | ... | ... | ... | 8,547 | ... | 8,547 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | .. | ... | ..... | ... | ... |
| | | Alienated | ... | 3,137 | ... | ... | 112 | 6 | 50 | 45 | ... | 709 | ... | ... | 8 | 6 | 216 | ... | 4,289 | ... | ... | ... | 2,866 | ... | 2,866 |
| | | Total | ... | 17,671 | ... | ... | 196 | 6 | 267 | 89 | ... | 1,949 | ... | ... | 158 | 154 | 1,276 | ... | 21,766 | ... | ... | ... | 11,413 | ... | 11,413 |
| 13 | Bijápur | Rayatwári | ... | 3,039 | ... | ... | 53 | ... | 7 | 2 | ... | 12 | ... | ... | 3 | 4 | 115 | ... | 3,235 | ... | ... | ... | 1,058 | ... | 1,058 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | .. | ... | ..... | ... | ... |
| | | Alienated | ... | 387 | ... | ... | 2 | ... | 1 | ... | ... | 2 | ... | ... | ... | ... | 19 | ... | 411 | ... | ... | ... | 161 | ... | 161 |
| | | Total | ... | 3,426 | ... | ... | 55 | ... | 8 | 2 | ... | 14 | ... | ... | 3 | 4 | 134 | ... | 3,646 | ... | ... | ... | 1,219 | ... | 1,219 |
| 14 | Dhárwár | Rayatwári | ... | 40,091 | 7 | ... | 1,221 | 511 | 29 | 2 | ... | 329 | ... | 69 | 128 | 155 | 726 | 1 | 43,269 | ... | ... | ... | 5,701 | ... | 5,701 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 1,857 | ... | ... | 47 | 55 | ... | ... | ... | 2 | ... | ... | ... | 12 | ... | ... | 1,973 | ... | ... | ... | 616 | ... | 616 |
| | | Total | ... | 41,948 | 7 | ... | 1,268 | 566 | 29 | 2 | ... | 331 | ... | 69 | 128 | 167 | 726 | 1 | 45,242 | ... | ... | ... | 6,317 | ... | 6,317 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | ... | 349 | 187 | ... | 194 | 3 | 31 | ... | ... | 588 | ... | ... | ... | 3 | 1 | ... | 1,356 | 2 | ... | 2 | 1,339 | ... | 1,339 |
| | | Other Government | ... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 355 | 187 | ... | 194 | 3 | 31 | ... | ... | 588 | ... | ... | ... | 3 | 1 | ... | 1,362 | 2 | ... | 2 | 1,339 | ... | 1,339 |
| 16 | Kolába | Rayatwári | ... | 45 | ... | ... | 23 | 458 | ... | ... | ... | 144 | ... | ... | ... | .. | ... | ... | 670 | ... | ... | ... | 44 | ... | 44 |
| | | Other Government | ... | 5 | ... | ... | ... | 1 | ... | ... | .. | 2 | ... | ... | ... | ... | ... | ... | 8 | ... | ... | ... | 25 | ... | 25 |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 50 | ... | ... | 23 | 459 | ... | ... | ... | 146 | ... | ... | ... | ... | ... | ... | 678 | ... | ... | ... | 69 | ... | 69 |
| 17 | Ratnágiri | Rayatwári | ... | 324 | ... | ... | ... | 433 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 757 | 15 | .. | 15 | 30 | ... | 30 |
| | | Other Government | ... | 2,369 | 25 | ... | ... | 1,293 | 21 | ... | ... | .. | ... | ... | ... | ... | ... | ... | 3,708 | 15 | ... | 15 | 732 | ... | 732 |
| | | Alienated | ... | 197 | ... | ... | ... | 28 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 225 | ... | ... | .. | 215 | ... | 215 |
| | | Total | ... | 2,890 | 25 | ... | ... | 1,754 | 21 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4,690 | 30 | ... | 30 | 977 | .. | 977 |
| 18 | Kánara | Rayatwári | ... | 995 | 243 | 5 | 1,290 | 263 | 9,333 | 62 | ... | ... | 6 | ... | ... | ... | 1 | 4 | 120 | 12,322 | ... | ... | ... | 3,390 | ... | 3,390 |
| | | Other Government | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 995 | 243 | 5 | 1,290 | 263 | 9,333 | 62 | ... | ... | 6 | ... | ... | ... | 1 | 4 | 120 | 12,322 | ... | ... | ... | 3,390 | ... | 3,390 |
| | Total A. | Rayatwári | ... | 995 | 108,826 | 733 | 1,290 | 3,557 | 10,745 | 3,054 | 1,224 | 4,045 | 12,967 | 474 | 1,884 | 1,873 | 616 | 4,225 | 306 | 156,814 | 19 | ... | 19 | 57,139 | .. | 57,139 |
| | | Other Government | ... | ... | 3,366 | 60 | ... | ... | 1,294 | 21 | ... | ... | 6 | 1,053 | ... | 41 | ... | 111 | 21 | 5,973 | 15 | ... | 15 | 1,857 | ... | 1,857 |
| | | Alienated | ... | ... | 11,908 | 50 | .. | 793 | 92 | 670 | 97 | 85 | 1,011 | ... | 39 | 508 | 94 | 549 | ... | 15,896 | 3 | ... | 3 | 8,737 | ... | 8,737 |
| | | Total | ... | 995 | 124,100 | 843 | 1,290 | 4,350 | 12,131 | 3,745 | 1,321 | 4,130 | 13,984 | 1,527 | 1,923 | 2,422 | 710 | 4,885 | 327 | 178,683 | 37 | ... | 37 | 67,733 | ... | 67,733 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | ... | 31 | ... | ... | ... | ... | ... | 8 | ... | 62 | 108 | 1 | ... | 8,421 | 22 | 9 | 8,662 | ... | 8 | 8 | 1,416 | ... | 1,416 |
| 20 | Hyderabad | | ... | 183 | ... | ... | ... | ... | ... | 6 | 3 | 39 | 9 | ... | 25 | 1,456 | 34 | 13 | 1,778 | ... | ... | ... | 892 | ... | 892 |
| 21 | Shikárpur | | ... | 145 | ... | ... | ... | ... | ... | 11 | 1 | 1,686 | 32 | ... | ... | 1 | 82 | 18 | 1,976 | ... | 13 | 13 | 565 | ... | 565 |
| 22 | Upper Sind Frontier | | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 66 | ... | ... | ... | ... | 1 | ... | 69 | ... | ... | ... | 11 | ... | 11 |
| 23 | Thar and Párkar | | ... | 14 | ... | ... | ... | ... | ... | ... | ... | 44 | ... | ... | ... | 2 | ... | ... | 60 | ... | ... | ... | 11 | ... | 11 |
| | | Total B. | ... | 375 | ... | ... | ... | ... | ... | 25 | 4 | 1,897 | 149 | 1 | 25 | 9,890 | 139 | 40 | 12,545 | ... | 21 | 21 | 2,895 | .... | 2,895 |
| | | Grand Total | .. | 124,375 | 843 | 1,290 | 4,350 | 12,131 | 3,745 | 1,346 | 4,134 | 15,881 | 1,676 | 1,924 | 2,447 | 10,600 | 5,024 | 367 | 191,228 | 37 | 21 | 58 | 70,628 | ... | 70,628 |

M.

## III.—Crops, 1889-90—*concluded.*

| No. | District. | | VIII.—Oil-seeds. Sesame (Til), Sesamum Indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Erandya) Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Niger-seed (Khurásni), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobare) Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli), Indigofera tinctoria. | Safflower (Kusumba), Carthamus Persicus. | Morinda (Al, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tag), Crotolaria juncea. | Hemp (Ambádi, Sheria), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder Net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | Acres. | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad. | Rayatwári... | 15,355 | 1,347 | 5,504 | 58 | 461 | ... | 1 | ... | ... | 22,726 | 66 | 756 | ... | | 822 | 139,054 | 805 | 35 | ... | ... | ... | 139,854 | 302 | 702,708 | 17,092 | 685,616 |
| | | Other Govt. | 11,388 | 368 | 2,844 | 84 | 1,412 | ... | ... | ... | ... | 16,096 | ... | 23 | ... | ... | 23 | 160,900 | 750 | 30 | ... | ... | ... | 161,680 | 18 | 602,268 | 6,894 | 595,374 |
| | | Alienated ... | 1,403 | ... | 35 | ... | ... | ... | ... | ... | ... | 1,438 | ... | ... | ... | ... | ... | 9,003 | 330 | ... | ... | ... | ... | 9,333 | 10 | 40,031 | 271 | 39,760 |
| | | Total ... | 28,146 | 1,715 | 8,383 | 142 | 1,873 | ... | 1 | ... | ... | 40,260 | 66 | 779 | ... | ... | 845 | 308,957 | 1,885 | 65 | ... | ... | ... | 310,907 | 330 | 1,345,007 | 24,257 | 1,320,750 |
| 2 | Kaira ... | Rayatwári... | 4,961 | 216 | 3,632 | 1,406 | 15 | ... | ... | ... | ... | 10,230 | 145 | 422 | ... | ... | 567 | 5,912 | 68 | 1,999 | ... | ... | ... | 7,979 | 17 | 565,131 | 18,349 | 546,782 |
| | | Other Govt. | 1,691 | ... | 669 | 175 | ... | ... | ... | ... | ... | 2,535 | 120 | 24 | ... | ... | 144 | 4,065 | 1 | 519 | ... | ... | ... | 4,585 | 13 | 160,176 | 5,248 | 154,928 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total ... | 6,652 | 216 | 4,301 | 1,581 | 15 | ... | ... | ... | ... | 12,765 | 265 | 446 | ... | ... | 711 | 9,977 | 69 | 2,518 | ... | ... | ... | 12,564 | 30 | 725,307 | 23,597 | 701,710 |
| 3 | Panch Maháls. | Rayatwári... | 17,998 | 25 | 1,001 | ... | 451 | 6,021 | ... | ... | ... | 25,496 | ... | 4 | ... | ... | 4 | 161 | 1,564 | 344 | ... | ... | ... | 2,069 | ... | 281,604 | 57,026 | 224,578 |
| | | Other Govt. | 1,492 | ... | 237 | ... | 182 | 1,299 | ... | ... | ... | 3,210 | ... | ... | ... | ... | ... | 401 | 1,054 | 130 | ... | ... | ... | 1,585 | ... | 71,305 | 9,248 | 62,057 |
| | | Alienated ... | 583 | ... | 181 | ... | 25 | 649 | ... | ... | ... | 1,438 | ... | ... | ... | ... | ... | 8 | 90 | 73 | ... | ... | ... | 171 | ... | 22,888 | 2,131 | 20,757 |
| | | Total ... | 20,073 | 25 | 1,419 | ... | 658 | 7,969 | ... | ... | ... | 30,144 | ... | 4 | ... | ... | 4 | 570 | 2,708 | 547 | ... | ... | ... | 3,825 | ... | 375,797 | 68,405 | 307,392 |
| 4 | Broach ... | Rayatwári... | 14,275 | ... | 1,851 | ... | ... | ... | ... | ... | ... | 16,126 | 630 | 25 | ... | ... | 655 | 256,890 | 8 | ... | ... | ... | ... | 256,898 | 69 | 595,270 | 952 | 594,318 |
| | | Other Govt. | 38 | ... | 2 | ... | ... | .. | ... | ... | ... | 40 | ... | ... | ... | ... | ... | 441 | ... | ... | ... | ... | ... | 441 | ... | 906 | ..... | 906 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | .. | ..... | ..... | ..... |
| | | Total ... | 14,313 | ... | 1,853 | ... | ... | ... | ... | ... | ... | 16,166 | 630 | 25 | ... | ... | 655 | 257,331 | 8 | ... | ... | ... | ... | 257,339 | 69 | 596,176 | 952 | 595,224 |
| 5 | Surat ... | Rayatwári... | 2,651 | ... | 34,332 | ... | 6 | 328 | 188 | ... | ... | 37,505 | ... | 4 | ... | ... | 4 | 91,947 | 1,742 | 55 | ... | ... | ... | 93,744 | 102 | 523,610 | 51,434 | 472,176 |
| | | Other Govt. | 4 | ... | 313 | ... | ... | ... | 11 | ... | ... | 328 | ... | ... | ... | ... | ... | 1,125 | 5 | ... | ... | ... | ... | 1,130 | ... | 5,673 | 499 | 5,174 |
| | | Alienated ... | 12 | ... | 54 | ... | ... | ... | 3 | ... | ... | 69 | ... | ... | ... | ... | ... | 36 | 8 | ... | ... | ... | ... | 44 | ... | 3,787 | 20 | 3,767 |
| | | Total ... | 2,667 | ... | 34,699 | ... | 6 | 328 | 202 | ... | ... | 37,902 | ... | 4 | ... | ... | 4 | 93,108 | 1,755 | 55 | ... | ... | ... | 94,918 | 102 | 533,070 | 51,953 | 481,117 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. | Rayatwári... | 73,192 | 28,071 | 4,550 | 2,137 | ... | 6,069 | 4,006 | ... | ... | 118,025 | 1,593 | 1 | 432 | ... | 2,026 | 983,987 | 1,209 | 3,462 | ... | ... | 1 | 988,659 | 35 | 2,822,529 | 8,008 | 2,814,521 |
| | | Other Govt. | 4,747 | 1,432 | 364 | ... | ... | 967 | 3 | ... | ... | 7,513 | ... | ... | ... | ... | ... | 3,945 | 268 | 3 | ... | ... | ... | 4,216 | ... | 53,000 | 20 | 52,980 |
| | | Alienated ... | 1,970 | 770 | 44 | ... | ... | 183 | 48 | ... | ... | 3,015 | ... | ... | ... | ... | ... | 24,806 | 58 | 102 | ... | ... | ... | 24,966 | ... | 70,197 | 202 | 69,995 |
| | | Total ... | 79,909 | 30,273 | 4,958 | 2,137 | ... | 7,219 | 4,057 | ... | ... | 128,553 | 1,593 | 1 | 432 | ... | 2,026 | 1,012,738 | 1,535 | 3,567 | ... | ... | 1 | 1,017,841 | 35 | 2,945,726 | 8,230 | 2,937,496 |
| 7 | Násik ... | Rayatwári... | 26,861 | 35,354 | 2,636 | 7,922 | ... | 109,054 | 11,737 | ... | ... | 193,564 | ... | ... | .. | ... | .. | 16,332 | 2,490 | 28 | ... | ... | ... | 18,850 | 9 | 1,877,856 | 18,271 | 1,859,585 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 1,480 | 2,376 | 3 | 543 | ... | 4,992 | 869 | .. | ... | 10,263 | ... | ... | ... | ... | ... | 217 | 213 | ... | ... | ... | ... | 430 | ... | 109,920 | 1,471 | 108,449 |
| | | Total ... | 28,341 | 37,730 | 2,639 | 8,465 | ... | 114,046 | 12,606 | ... | ... | 203,827 | ... | ... | ... | ... | ... | 16,549 | 2,703 | 28 | ... | ... | ... | 19,280 | 9 | 1,987,776 | 19,742 | 1,968,034 |
| 8 | Ahmadnagar. | Rayatwári... | 14,254 | 8,788 | 273 | 86,410 | ... | 29,985 | 3,285 | 2 | ... | 142,997 | 309 | ... | ... | ... | 309 | 50,155 | 347 | 7,172 | ... | ... | ... | 57,674 | 29 | 2,436,478 | 30,556 | 2,405,922 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | .. | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 2,101 | 1,395 | 1 | 13,507 | ... | 144 | 112 | ... | ... | 17,260 | 50 | ... | ... | ... | 50 | 13,365 | 8 | 741 | ... | ... | ... | 14,114 | 10 | 318,597 | 1,597 | 317,000 |
| | | Total ... | 16,355 | 10,183 | 274 | 99,917 | ... | 30,129 | 3,397 | 2 | ... | 160,257 | 359 | ... | ... | ... | 359 | 63,520 | 355 | 7,913 | ... | ... | ... | 71,788 | 39 | 2,755,075 | 32,153 | 2,722,922 |
| 9 | Poona ... | Rayatwári... | 2,026 | 862 | 142 | 89,541 | ... | 36,613 | 7,943 | ... | 230 | 137,357 | ... | ... | ... | ... | ... | 822 | 421 | 3,530 | ... | ... | 3 | 4,776 | 508 | 1,810,572 | 61,441 | 1,749,131 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 1,194 | 144 | 5 | 11,812 | ... | 4,571 | 2,099 | ... | 35 | 19,860 | ... | ... | ... | ... | ... | 68 | 95 | 342 | ... | ... | ... | 505 | 526 | 320,439 | 11,358 | 309,081 |
| | | Total ... | 3,220 | 1,006 | 147 | 101,353 | ... | 41,184 | 10,042 | ... | 265 | 157,217 | ... | ... | ... | ... | ... | 890 | 516 | 3,872 | ... | ... | 3 | 5,281 | 1,034 | 2,131,011 | 72,799 | 2,058,212 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári... | 9,228 | 27,529 | 8,700 | 121,110 | ... | 17,388 | 34,285 | ... | ... | 218,240 | 57 | 214 | ... | ... | 271 | 7,675 | 207 | 24,291 | ... | ... | 18 | 32,191 | 35 | 2,012,638 | 27,289 | 1,985,349 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 988 | 1,157 | 535 | 9,135 | ... | 1,386 | 2,939 | ... | ... | 16,140 | ... | ... | ... | ... | ... | 470 | 11 | 863 | ... | ... | ... | 1,344 | 1 | 150,748 | 2,206 | 148,542 |
| | | Total ... | 10,216 | 28,686 | 9,235 | 130,245 | ... | 18,774 | 37,224 | ... | ... | 234,380 | 57 | 214 | ... | ... | 271 | 8,145 | 218 | 25,154 | ... | ... | 18 | 33,535 | 36 | 2,163,386 | 29,495 | 2,133,891 |
| 11 | Sátára ... | Rayatwári... | 242 | 2,140 | 647 | 22,300 | ... | 16,964 | 45,973 | ... | ... | 88,266 | ... | ... | ... | ... | ... | 5,672 | 4,077 | 6,351 | ... | ... | ... | 16,100 | 116 | 1,566,154 | 92,869 | 1,473,285 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 43 | 473 | 152 | 3,645 | ... | 3,901 | 14,747 | ... | ... | 22,961 | ... | ... | ... | ... | ... | 369 | 952 | 1,347 | ... | ... | ... | 2,668 | 27 | 334,167 | 26,286 | 307,881 |
| | | Total ... | 285 | 2,613 | 799 | 25,945 | ... | 20,865 | 60,720 | ... | ... | 111,227 | ... | ... | ... | ... | ... | 6,041 | 5,029 | 7,698 | ... | ... | ... | 18,768 | 143 | 1,900,321 | 119,155 | 1,781,166 |
| | III.—*Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári... | 6,027 | 1,894 | 8,689 | 30,947 | ... | 3,020 | 10,676 | ... | ... | 61,253 | ... | ... | ... | ... | ... | 121,084 | 2,035 | 2,790 | ... | ... | ... | 125,909 | 54 | 1,448,464 | 28,617 | 1,419,847 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 1,037 | 236 | 2,853 | 8,820 | ... | 520 | 2,236 | ... | ... | 15,702 | ... | ... | ... | ... | ... | 21,703 | 642 | 490 | ... | ... | ... | 22,835 | 13 | 335,159 | 3,179 | 331,980 |
| | | Total ... | 7,064 | 2,130 | 11,542 | 39,767 | ... | 3,540 | 12,912 | ... | ... | 76,955 | ... | .. | ... | ... | ... | 142,787 | 2,677 | 3,280 | ... | ... | ... | 148,744 | 67 | 1,783,623 | 31,796 | 1,751,827 |
| 13 | Bijápur ... | Rayatwári... | 31,123 | 35,082 | 8,672 | 63,967 | ... | 19,989 | 81 | ... | ... | 158,914 | 7 | ... | ... | ... | 7 | 351,559 | 63 | 13,821 | ... | ... | ... | 365,413 | 15 | 2,463,183 | 5,746 | 2,457,437 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 2,943 | 2,983 | 1,242 | 6,555 | ... | 1,491 | 7 | ... | ... | 15,221 | ... | ... | .. | ... | ... | 47,296 | 17 | 1,236 | ... | ... | ... | 48,549 | 1 | 285,503 | 358 | 285,145 |
| | | Total ... | 34,066 | 38,065 | 9,914 | 70,522 | ... | 21,480 | 88 | ... | ... | 174,135 | 7 | ... | ... | ... | 7 | 398,855 | 80 | 15,057 | ... | ... | ... | 413,992 | 16 | 2,748,686 | 6,104 | 2,742,582 |
| 14 | Dhárwár | Rayatwári... | 9,646 | 20,042 | 17,508 | 41,885 | ... | 3,679 | ... | ... | ... | 92,760 | ... | ... | ... | ... | ... | 481,565 | 167 | 4,823 | ... | ... | ... | 486,555 | 22 | 1,965,945 | 25,513 | 1,940,432 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | 290 | 898 | 894 | 1,458 | ... | 351 | ... | ... | ... | 3,891 | ... | ... | ... | ... | ... | 15,282 | 12 | 285 | ... | .. | ... | 15,579 | 1 | 109,677 | 1,623 | 108,054 |
| | | Total ... | 9,936 | 20,940 | 18,402 | 43,343 | ... | 4,030 | ... | ... | ... | 96,651 | ... | ... | ... | ... | ... | 496,847 | 179 | 5,108 | ... | ... | ... | 502,134 | 23 | 2,075,622 | 27,136 | 2,048,486 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári... | 5,385 | ... | 2,667 | 2 | 34 | 13,750 | ... | ... | 43 | 21,881 | ... | ... | ... | ... | ... | ..... | 3,389 | 2,941 | ... | ... | ... | 6,330 | 22 | 527,920 | 5,965 | 521,955 |
| | | Other Govt. | 12 | ... | ... | ... | ... | 16 | ... | ... | ... | 28 | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 2,217 | 12 | 2,205 |
| | | Alienated ... | 4 | ... | ... | ... | ... | 104 | ... | ... | ... | 108 | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 8,537 | 56 | 8,481 |
| | | Total ... | 5,401 | ... | 2,667 | 2 | 34 | 13,870 | ... | ... | 43 | 22,017 | ... | ... | ... | ... | ... | ..... | 3,389 | 2,941 | ... | ... | ... | 6,330 | 22 | 538,674 | 6,033 | 532,641 |
| 16 | Kolába .. | Rayatwári... | 1,085 | ... | 41 | ... | ... | ... | ... | ... | 101 | 1,227 | ... | ... | ... | .. | ... | ..... | 191 | 1 | ... | ... | ... | 192 | 1 | 179,781 | 5,339 | 174,442 |
| | | Other Govt. | 4,327 | ... | 5 | ... | ... | 35 | ... | ... | ... | 4,367 | ... | ... | ... | ... | ... | ..... | 402 | ... | ... | ... | ... | 402 | ... | 166,430 | 5,360 | 161,070 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 1,148 | 16 | 1,132 |
| | | Total ... | 5,412 | ... | 46 | ... | ... | 35 | ... | ... | 101 | 5,594 | ... | ... | ... | ... | ... | ..... | 593 | 1 | ... | ... | ... | 594 | 1 | 347,359 | 10,715 | 336,644 |
| 17 | Ratnágiri . | Rayatwári... | 1,979 | ... | ... | ... | ... | ... | ... | ... | ... | 1,979 | ... | ... | ... | ... | ... | ..... | 422 | ... | ... | ... | ... | 422 | 131 | 44,467 | 5,020 | 39,447 |
| | | Other Govt. | 20,978 | ... | ... | ... | ... | ... | ... | ... | ... | 20,978 | ... | ... | ... | ... | ... | ..... | 4,512 | 10 | ... | ... | ... | 4,522 | ... | 454,226 | 31,358 | 422,868 |
| | | Alienated ... | 953 | ... | ... | ... | ... | ... | ... | ... | ... | 953 | ... | ... | ... | ... | ... | ..... | 63 | ... | ... | ... | ... | 63 | ... | 17,910 | 1,644 | 16,266 |
| | | Total ... | 23,910 | ... | ... | ... | ... | ... | ... | ... | ... | 23,910 | ... | ... | ... | ... | ... | ..... | 4,997 | 10 | ... | ... | ... | 5,007 | 131 | 516,603 | 38,022 | 478,581 |
| 18 | Kánara ... | Rayatwári... | 129 | 4 | 227 | ... | ... | 68 | ... | ... | 289 | 717 | ... | ... | ... | ... | ... | ..... | 70 | 51 | ... | ... | ... | 121 | 58 | 246,872 | 12,355 | 234,517 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ..... | ..... |
| | | Total ... | 129 | 4 | 227 | ... | ... | 68 | ... | ... | 289 | 717 | ... | ... | ... | ... | ... | ..... | 70 | 51 | ... | ... | ... | 121 | 58 | 246,872 | 12,355 | 234,517 |
| | Total A. | Rayatwári... | 236,417 | 161,354 | 101,072 | 467,685 | 967 | 262,928 | 118,175 | 2 | 663 | 1,349,263 | 2,807 | 1,426 | 432 | ... | 4,665 | 2,512,815 | 19,275 | 71,694 | ... | ... | 22 | 2,603,806 | 1,525 | 22,071,182 | 471,842 | 21,599,340 |
| | | Other Govt. | 44,677 | 1,800 | 4,434 | 259 | 1,594 | 2,317 | 14 | ... | ... | 55,095 | 120 | 47 | ... | ... | 167 | 170,877 | 6,992 | 692 | ... | ... | ... | 178,561 | 31 | 1,516,201 | 58,639 | 1,457,562 |
| | | Alienated ... | 15,001 | 10,432 | 5,999 | 55,475 | 25 | 18,292 | 23,060 | ... | 35 | 128,319 | 50 | ... | ... | ... | 50 | 132,623 | 2,499 | 5,479 | ... | ... | ... | 140,601 | 589 | 2,128,708 | 52,418 | 2,076,290 |
| | | Total ... | 296,095 | 173,586 | 111,505 | 523,419 | 2,586 | 283.537 | 141,249 | 2 | 698 | 1,532,677 | 2,977 | 1,473 | 432 | ... | 4,882 | 2,816,315 | 28,766 | 77,865 | ... | ... | 22 | 2,922,968 | 2,145 | 25,716,091 | 582,899 | 25,133,192 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... | | 6,497 | ... | 59 | ... | 10,328 | ... | ... | ... | 19,468 | 36,352 | 53 | 1 | ... | ... | 54 | 785 | 151 | ... | ... | ... | .. | 936 | 1 | 418,148 | 24,725 | 393,423 |
| 20 | Hyderabad ... ... | | 50,084 | ... | ... | ... | 11,195 | ... | ... | ... | 38,182 | 99,461 | 8,779 | 2 | ... | 7 | 8,788 | 76,417 | 306 | 2 | ... | ... | ... | 76,725 | 14 | 848,320 | 15,211 | 833,109 |
| 21 | Shikárpur ... ... | | 20,765 | 2 | 65,930 | ... | ... | ... | ... | ... | 78,466 | 160,163 | 3,453 | ... | ... | 458 | 3,911 | 7,638 | 56 | ... | ... | ... | ... | 7,694 | 152 | 1,073,621 | 163,691 | 909,930 |
| 22 | Upper Sind Frontier. | | 30,648 | 8,270 | ... | ... | 2,450 | ... | ... | ... | ... | 41,368 | 141 | ... | ... | ... | 141 | 1,711 | ... | 16 | ... | ... | ... | 1,727 | 107 | 186,841 | 10,262 | 176,579 |
| 23 | Thar and Párkar ... | | 8,226 | ... | ... | ... | 512 | ... | ... | ... | 62,919 | 71,657 | 350 | 1 | ... | ... | 351 | 13,276 | ... | 24 | ... | ... | .. | 13,300 | 47 | 651,591 | 8,869 | 642,722 |
| | Total B. ... | | 116,220 | 8,272 | 65,989 | ... | 24,485 | ... | ... | ... | 194,035 | 409,001 | 12,776 | 4 | ... | 465 | 13,245 | 99,827 | 513 | 42 | ... | ... | ... | 100,382 | 321 | 3,178,521 | 222,758 | 2,955,763 |
| | Grand Total ... | | 412,315 | 181,858 | 177,494 | 523,419 | 27,071 | 283,537 | 141,249 | 2 | 194,733 | 1,941,678 | 15,753 | 1,477 | 432 | 465 | 18,127 | 2,916,142 | 29,279 | 77,907 | ... | ... | 22 | 3,023,350 | 2,466 | 28,894,612 | 805,657 | 28,088,955 |

# IV.—Irrigation, 1889-90.

| No. | District. | | Net Area cropped. | Area irrigated from Canals. | Area irrigated from other sources. | Total Area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct Area cropped with irrigation more than once. | Balance net irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | Acres. | | | Acres. | | | | | | | | Acres. | Acres. | Acres. |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. .. | 685,616 | 2,973 | 35,882 | 38,855 | 11,024 | 16,966 | 12,087 | 737 | 3,874 | 2,323 | 125 | 47,136 | 8,281 | 38,855 |
| | | Other Government .. .. | 595,374 | 90 | 22,080 | 22,170 | 12,611 | 2,325 | 2,817 | 734 | 2,331 | 393 | 974 | 22,185 | 15 | 22,170 |
| | | Alienated .. .. .. | 39,760 | .... | 1,445 | 1,445 | 550 | 441 | 217 | .... | 218 | 5 | 20 | 1,451 | 6 | 1,445 |
| | | Total ... | 1,320,750 | 3,063 | 59,407 | 62,470 | 24,185 | 19,732 | 15,121 | 1,471 | 6,423 | 2,721 | 1,119 | 70,772 | 8,302 | 62,470 |
| 2 | Kaira ... ... | Rayatwári .. .. .. | 546,782 | 4,936 | 22,936 | 27,872 | 4,824 | 8,536 | 6,590 | 271 | 3,523 | 5,756 | 437 | 29,937 | 2,065 | 27,872 |
| | | Other Government .. .. | 154,928 | .... | 13,512 | 13,512 | 941 | 175 | 1,125 | 274 | 2,278 | 8,690 | 384 | 13,867 | 355 | 13,512 |
| | | Alienated .. .. .. | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 701,710 | 4,936 | 36,448 | 41,384 | 5,765 | 8,711 | 7,715 | 545 | 5,801 | 14,446 | 821 | 43,804 | 2,420 | 41,384 |
| 3 | Panch Maháls .. | Rayatwári .. .. .. | 224,578 | .... | 1,515 | 1,515 | 534 | 116 | 241 | 159 | 244 | 221 | .... | 1,515 | .... | 1,515 |
| | | Other Government .. .. | 62,057 | .... | 384 | 384 | 244 | .... | .... | 25 | 107 | 8 | .... | 384 | .... | 384 |
| | | Alienated .. .. .. | 20,757 | 5 | 6 | 11 | .... | .... | .... | 6 | 5 | .... | .... | 11 | .... | 11 |
| | | Total ... | 307,392 | 5 | 1,905 | 1,910 | 778 | 116 | 241 | 190 | 356 | 229 | ... | 1,910 | ... | 1,910 |
| 4 | Broach ... | Rayatwári .. .. .. | 594,318 | .... | 954 | 954 | 2 | 113 | 4 | 130 | 485 | 255 | 2 | 991 | 37 | 954 |
| | | Other Government .. .. | 906 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total ... | 595,224 | ... | 954 | 954 | 2 | 113 | 4 | 130 | 485 | 255 | 2 | 991 | 37 | 954 |
| 5 | Surat ... ... | Rayatwári .. .. .. | 472,176 | .... | 10,219 | 10,219 | 31 | 3,293 | 116 | 4,360 | 1,636 | 923 | .... | 10,359 | 140 | 10,219 |
| | | Other Government .. .. | 5,174 | .... | 103 | 103 | .... | .... | .... | 68 | 19 | 16 | .... | 103 | .... | 103 |
| | | Alienated .. .. .. | 3,767 | .... | 16 | 16 | .... | .... | .... | 10 | 3 | 3 | .... | 16 | .... | 16 |
| | | Total ... | 481,117 | ... | 10,338 | 10,338 | 31 | 3,293 | 116 | 4,438 | 1,658 | 942 | ... | 10,478 | 140 | 10,338 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. .. | 2,814,521 | 10,183 | 25,700 | 35,883 | 11,139 | 1,789 | 4,400 | 1,755 | 8,624 | 9,658 | 270 | 37,635 | 1,752 | 35,883 |
| | | Other Government .. .. | 52,980 | 1 | 57 | 58 | 32 | .... | .... | .... | 24 | 2 | .... | 58 | .... | 58 |
| | | Alienated .. .. .. | 69,995 | 298 | 1,048 | 1,346 | 153 | 77 | 87 | 81 | 904 | 193 | 2 | 1,497 | 151 | 1,346 |
| | | Total ... | 2,937,496 | 10,482 | 26,805 | 37,287 | 11,324 | 1,866 | 4,487 | 1,836 | 9,552 | 9,853 | 272 | 39,190 | 1,903 | 37,287 |
| 7 | Násik... ... | Rayatwári .. .. .. | 1,859,585 | 24,451 | 40,404 | 64,855 | 23,503 | 2,616 | 13,527 | 6,878 | 12,779 | 11,201 | 1,104 | 71,608 | 6,753 | 64,855 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 108,449 | 2,013 | 3,247 | 5,260 | 1,200 | 128 | 983 | 721 | 1,956 | 940 | 89 | 6,017 | 757 | 5,260 |
| | | Total ... | 1,968,034 | 26,464 | 43,651 | 70,115 | 24,703 | 2,744 | 14,510 | 7,599 | 14,735 | 12,141 | 1,193 | 77,625 | 7,510 | 70,115 |
| 8 | Ahmadnagar... | Rayatwári .. .. .. | 2,405,922 | 4,926 | 74,041 | 78,967 | 29,307 | 704 | 32,721 | 2,197 | 15,009 | 6,198 | 1,998 | 88,134 | 9,167 | 78,967 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 317,000 | 65 | 9,477 | 9,542 | 3,719 | 65 | 4,406 | 160 | 1,501 | 592 | 130 | 10,573 | 1,031 | 9,542 |
| | | Total ... | 2,722,922 | 4,991 | 83,518 | 88,509 | 33,026 | 769 | 37,127 | 2,357 | 16,510 | 6,790 | 2,128 | 98,707 | 10,198 | 88,509 |
| 9 | Poona ... | Rayatwári .. .. .. | 1,749,131 | 29,779 | 64,559 | 94,338 | 23,350 | 936 | 42,260 | 6,181 | 25,171 | 4,827 | 2,632 | 105,357 | 11,019 | 94,338 |
| | | Other Government .. .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated .. .. .. | 309,081 | 3,762 | 7,800 | 11,562 | 3,104 | 58 | 4,222 | 807 | 3,348 | 712 | 236 | 12,537 | 975 | 11,562 |
| | | Total ... | 2,058,212 | 33,541 | 72,359 | 105,900 | 26,454 | 994 | 46,482 | 6,988 | 28,519 | 5,539 | 2,918 | 117,894 | 11,994 | 105,900 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 1,985,349 | 8,827 | 73,618 | 82,445 | 32,412 | 3,957 | 39,864 | 3,001 | 7,603 | 19,468 | 414 | 106,719 | 24,274 | 82,445 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 1,48,542 | 279 | 4,662 | 4,941 | 2,546 | 155 | 2,764 | 187 | 230 | 966 | 28 | 6,876 | 1,935 | 4,941 |
| | | Total | 2,133,891 | 9,106 | 78,280 | 87,386 | 34,958 | 4,112 | 42,628 | 3,188 | 7,833 | 20,434 | 442 | 113,595 | 26,209 | 87,386 |
| 11 | Sátára | Rayatwári | 1,473,285 | 6,830 | 75,483 | 82,313 | 21,146 | 4,223 | 21,579 | 9,653 | 12,342 | 27,994 | 796 | 97,733 | 15,420 | 82,313 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 307,881 | 873 | 21,418 | 22,291 | 5,327 | 1,721 | 3,482 | 2,858 | 3,813 | 7,618 | 109 | 24,928 | 2,637 | 22,291 |
| | | Total | 1,781,166 | 7,703 | 96,901 | 104,604 | 26,473 | 5,944 | 25,061 | 12,511 | 16,155 | 35,612 | 905 | 122,661 | 18,057 | 104,604 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 1,419,847 | 2,136 | 31,463 | 33,599 | 2,100 | 7,858 | 5,975 | 8,431 | 9,502 | 1,249 | 71 | 35,186 | 1,587 | 33,599 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 331,980 | 1,549 | 8,375 | 9,924 | 901 | 295 | 2,369 | 2,795 | 2,975 | 1,015 | 52 | 10,402 | 478 | 9,924 |
| | | Total | 1,751,827 | 3,685 | 39,838 | 43,523 | 3,001 | 8,153 | 8,344 | 11,226 | 12,477 | 2,264 | 123 | 45,588 | 2,065 | 43,523 |
| 13 | Bijápur | Rayatwári | 2,457,437 | 652 | 7,922 | 8,574 | 1,460 | 1,346 | 824 | 1,058 | 3,146 | 1,681 | 128 | 9,643 | 1,069 | 8,574 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 285,145 | 3 | 1,234 | 1,237 | 229 | 130 | 128 | 160 | 442 | 230 | 35 | 1,354 | 117 | 1,237 |
| | | Total | 2,742,582 | 655 | 9,156 | 9,811 | 1,689 | 1,476 | 952 | 1,218 | 3,588 | 1,911 | 163 | 10,997 | 1,186 | 9,811 |
| 14 | Dhárwár | Rayatwári | 1,940,432 | 7,259 | 77,369 | 84,628 | 24 | 73,708 | 454 | 5,429 | 3,121 | 2,615 | 2 | 85,353 | 725 | 84,628 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | 108,054 | 288 | 8,601 | 8,889 | .... | 7,995 | .... | 490 | 239 | 170 | .... | 8,894 | 5 | 8,889 |
| | | Total | 2,048,486 | 7,547 | 85,970 | 93,517 | 24 | 81,703 | 454 | 5,919 | 3,360 | 2,785 | 2 | 94,247 | 730 | 93,517 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 521,955 | .... | 5,018 | 5,018 | .... | .... | .... | 1,332 | 3,538 | 143 | 42 | 5,055 | 37 | 5,018 |
| | | Other Government | 2,205 | .... | 7 | 7 | .... | .... | .... | .... | 7 | .... | .... | 7 | .... | 7 |
| | | Alienated | 8,481 | .... | 53 | 53 | .... | .... | .... | .... | 53 | .... | .... | 53 | .... | 53 |
| | | Total | 532,641 | ..... | 5,078 | 5,078 | ..... | ..... | ..... | 1,332 | 3,598 | 143 | 42 | 5,115 | 37 | 5,078 |
| 16 | Kolába | Rayatwári | 174,442 | .... | 1,805 | 1,805 | .... | .... | 1 | 38 | 1,474 | 292 | .... | 1,805 | .... | 1,805 |
| | | Other Government | 161,070 | .... | 33 | 33 | .... | .... | .... | 12 | 17 | 4 | .... | 33 | .... | 33 |
| | | Alienated | 1,132 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total | 336,644 | ..... | 1,838 | 1,838 | ..... | ..... | 1 | 50 | 1,491 | 296 | ..... | 1,838 | ..... | 1,838 |
| 17 | Ratnágiri | Rayatwári | 39,447 | 22 | 922 | 944 | .... | 771 | 62 | 1 | 76 | 34 | .... | 944 | .... | 944 |
| | | Other Government | 422,868 | 1,163 | 4,620 | 5,783 | .... | 2,113 | 234 | 338 | 3,086 | 12 | .... | 5,783 | .... | 5,783 |
| | | Alienated | 16,266 | 11 | 188 | 199 | .... | 153 | 3 | 4 | 39 | .... | .... | 199 | .... | 199 |
| | | Total | 478,581 | 1,196 | 5,730 | 6,926 | ..... | 3,037 | 299 | 343 | 3,201 | 46 | ..... | 6,926 | ..... | 6,926 |
| 18 | Kánara | Rayatwári | 234,517 | .... | 26,729 | 26,729 | .... | 13,966 | 381 | 2,732 | 7,256 | 2,395 | .... | 26,730 | 1 | 26,729 |
| | | Other Government | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Alienated | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | | Total | 234,517 | ..... | 26,729 | 26,729 | ..... | 13,966 | 381 | 2,732 | 7,256 | 2,395 | ..... | 26,730 | 1 | 26,729 |
| | Total A. | Rayatwári | 21,599,340 | 102,974 | 576,539 | 679,513 | 160,856 | 140,898 | 181,086 | 54,343 | 119,403 | 97,233 | 8,021 | 761,840 | 82,327 | 679,513 |
| | | Other Government | 1,457,562 | 1,254 | 40,796 | 42,050 | 13,828 | 4,613 | 4,176 | 1,451 | 7,869 | 9,125 | 1,358 | 42,420 | 370 | 42,050 |
| | | Alienated | 2,076,290 | 9,146 | 67,570 | 76,716 | 17,729 | 11,218 | 18,661 | 8,279 | 15,726 | 12,444 | 751 | 84,808 | 8,092 | 76,716 |
| | | Total | 25,133,192 | 113,374 | 684,905 | 798,279 | 192,413 | 156,729 | 203,923 | 64,073 | 142,998 | 118,802 | 10,130 | 889,068 | 90,789 | 798,279 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 393,423 | 302,286 | 91,137 | 393,423 | 42,259 | 172,144 | 142,257 | 1,416 | 5,812 | 46,427 | 7,833 | 418,148 | 24,725 | 393,423 |
| 20 | Hyderabad | | 833,109 | 777,194 | 49,268 | 826,462 | 43,805 | 163,745 | 420,771 | 891 | 12,466 | 185,037 | 14,774 | 841,489 | 15,027 | 826,462 |
| 21 | Shikárpur | | 909,930 | 645,057 | 264,873 | 909,930 | 252,971 | 218,176 | 411,064 | 565 | 14,474 | 175,272 | 1,099 | 1,073,621 | 163,691 | 909,930 |
| 22 | Upper Sind Frontier | | 176,579 | 166,357 | 10,222 | 176,579 | 15,592 | 12,461 | 113,958 | 11 | 1,307 | 43,508 | 4 | 186,841 | 10,262 | 176,579 |
| 23 | Thar and Párkar | | 642,722 | 258,302 | 49 | 258,351 | 32,229 | 90,018 | 56,699 | 11 | 607 | 85,476 | 389 | 265,429 | 7,078 | 258,351 |
| | | Total B. | 2,955,763 | 2,149,196 | 415,549 | 2,564,745 | 386,856 | 656,544 | 1,144,749 | 2,894 | 34,666 | 535,720 | 24,099 | 2,785,528 | 220,783 | 2,564,745 |
| | | Grand Total | 28,088,955 | 2,262,570 | 1,100,454 | 3,363,024 | 579,269 | 813,273 | 1,348,672 | 66,967 | 177,664 | 654,522 | 34,229 | 3,674,596 | 311,572 | 3,363,024 |

# V .—Agricultural Stock, 1889-90.

| No. | District. | | Cattle and other Quadrupeds. | | | | | | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Plough Cattle. | | Bulls for breeding purposes. | | Oxen and He-Buffaloes for other purposes. | | Milch Cattle. | | Young Stock. | | Total Cattle. | Horses and Ponies. | Sheep. | Goats. | Small. | Large, *i.e.* over two Bullocks. | For riding. | For carrying loads. |
| | | | Oxen. | He-Buffaloes. | Bulls. | Bull Buffaloes. | Oxen. | He-Buffaloes. | Cows. | She-Buffaloes. | Calves. | Buffalo Calves. | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarāt.* | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári .. .. | 82,230 | 32 | 314 | 365 | 2,498 | 370 | 49,318 | 58,776 | 27,093 | 27,226 | 248,222 | 3,121 | 24,227 | 12,764 | 38,524 | 95 | 823 | 13,056 |
| | | Other Government . | 54,065 | 35 | 187 | 93 | 1,104 | 235 | 36,668 | 25,713 | 16,597 | 11,807 | 146,504 | 2,605 | 21,903 | 13,768 | 25,238 | 265 | 194 | 7,897 |
| | | Alienated .. .. | 5,485 | 2 | 64 | 18 | 142 | 34 | 2,985 | 2,832 | 1,429 | 1,250 | 14,241 | 306 | 2,206 | 641 | 2,405 | 81 | 57 | 984 |
| | | Total ... | 141,780 | 69 | 565 | 476 | 3,744 | 639 | 88,971 | 87,321 | 45,119 | 40,283 | 408,967 | 6,032 | 48,336 | 27,173 | 66,167 | 441 | 1,074 | 21,937 |
| 2 | Kaira ... ... | Rayatwári .. .. | 94,414 | 15 | 222 | 279 | 733 | 93 | 40,379 | 73,738 | 31,510 | 51,230 | 292,613 | 1,762 | 6,886 | 26,540 | 49,154 | .... | 790 | 19,517 |
| | | Other Government . | 22,846 | 12 | 18 | 175 | 231 | 78 | 2,957 | 35,001 | 3,648 | 20,617 | 85,583 | 342 | 2,617 | 4,975 | 13,738 | 2 | 456 | 8,074 |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Total ... | 117,260 | 27 | 240 | 454 | 964 | 171 | 43,336 | 108,739 | 35,158 | 71,847 | 378,196 | 2,104 | 9,503 | 31,515 | 62,892 | 2 | 1,246 | 27,591 |
| 3 | Panch Mahāls ... | Rayatwári .. .. | 57,252 | 13 | 432 | 214 | 1,501 | 35 | 47,100 | 14,728 | 43,783 | 8,950 | 174,008 | 1,865 | 2,936 | 17,317 | 28,633 | .... | 131 | 5,389 |
| | | Other Government . | 22,460 | 8 | 94 | 54 | 384 | 47 | 19,058 | 5,758 | 16,743 | 3,465 | 68,071 | 748 | 3,160 | 6,710 | 11,216 | .... | 67 | 2,836 |
| | | Alienated .. .. | 11,147 | 10 | 93 | 44 | 205 | 10 | 9,664 | 2,587 | 8,386 | 1,453 | 33,599 | 242 | 342 | 3,596 | 5,598 | .... | 5 | 1,114 |
| | | Total ... | 90,859 | 31 | 619 | 312 | 2,090 | 92 | 75,822 | 23,073 | 68,912 | 13,868 | 275,678 | 2,855 | 6,438 | 27,623 | 45,447 | ..... | 203 | 8,839 |
| 4 | Broach ... ... | Rayatwári .. .. | 55,131 | 13 | 77 | 98 | 399 | 60 | 10,709 | 28,656 | 13,050 | 22,610 | 130,803 | 2,444 | 21,383 | 16,836 | 26,568 | .... | 3,204 | 15,763 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Total ... | 55,131 | 13 | 77 | 98 | 399 | 60 | 10,709 | 28,656 | 13,050 | 22,610 | 130,803 | 2,444 | 21,383 | 16,836 | 26,568 | ..... | 3,204 | 15,763 |
| 5 | Surat ... ... | Rayatwári .. .. | 98,904 | 3,914 | 285 | 218 | 5,428 | 213 | 64,286 | 41,422 | 73,177 | 31,584 | 319,431 | 959 | 31,566 | 67,024 | 47,151 | 879 | 8,020 | 27,482 |
| | | Other Government . | 643 | 51 | 3 | 2 | 15 | .. | 711 | 316 | 874 | 224 | 2,839 | 2 | 43 | 368 | 399 | 7 | 56 | 223 |
| | | Alienated .. .. | 678 | 7 | 2 | .. | 2 | .. | 377 | 272 | 424 | 169 | 1,931 | 2 | 15 | 62 | 301 | 1 | 61 | 224 |
| | | Total ... | 100,225 | 3,972 | 290 | 220 | 5,445 | 213 | 65,374 | 42,010 | 74,475 | 31,977 | 324,201 | 963 | 31,624 | 67,454 | 47,851 | 887 | 8,137 | 27,929 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári .. .. | 325,796 | 1,628 | 6,493 | 751 | 19,673 | 2,499 | 174,167 | 95,521 | 120,274 | 49,581 | 796,383 | 20,778 | 35,089 | 129,330 | 92,323 | 18,587 | 3,514 | 60,999 |
| | | Other Government . | 19,133 | 71 | 81 | 25 | 635 | 33 | 15,179 | 2,736 | 10,446 | 1,305 | 49,644 | 390 | 49 | 2,616 | 7,967 | 60 | 294 | 2,547 |
| | | Alienated .. .. | 9,664 | 31 | 129 | 33 | 782 | 102 | 4,724 | 2,701 | 3,215 | 1,359 | 22,740 | 541 | 1,221 | 3,643 | 1,983 | 981 | 802 | 1,298 |
| | | Total ... | 354,593 | 1,730 | 6,703 | 809 | 21,090 | 2,634 | 194,070 | 100,958 | 133,935 | 52,245 | 868,767 | 21,709 | 36,359 | 135,589 | 102,273 | 19,628 | 34,610 | 64,844 |
| 7 | Násik ... ... | Rayatwári .. .. | 192,350 | 22,024 | 2,610 | 190 | 10,425 | 629 | 137,144 | 24,804 | 79,178 | 12,733 | 482,087 | 12,290 | 89,294 | 97,989 | 47,880 | 23,058 | 10,182 | 20,479 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 13,238 | 1,428 | 197 | 8 | 475 | 23 | 7,081 | 1,384 | 4,139 | 626 | 28,599 | 793 | 5,823 | 5,869 | 2,705 | 1,876 | 695 | 1,440 |
| | | Total ... | 205,588 | 23,452 | 2,807 | 198 | 10,900 | 652 | 144,225 | 26,188 | 83,317 | 13,359 | 510,686 | 13,083 | 95,117 | 103,858 | 50,585 | 24,934 | 10,877 | 21,919 |
| 8 | Ahmadnagar ... | Rayatwári .. .. | 250,247 | 5,901 | 757 | 166 | 6,929 | 1,073 | 171,723 | 29,808 | 110,110 | 15,674 | 592,388 | 19,767 | 241,663 | 136,693 | 23,711 | 38,336 | 10,974 | 15,699 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 29,582 | 144 | 69 | 18 | 898 | 128 | 19,083 | 2,689 | 12,021 | 1,387 | 66,019 | 2,406 | 32,616 | 16,409 | 5,267 | 4,212 | 1,029 | 1,645 |
| | | Total ... | 279,829 | 6,045 | 826 | 184 | 7,827 | 1,201 | 190,806 | 32,497 | 122,131 | 17,061 | 658,407 | 22,173 | 274,279 | 153,102 | 28,978 | 42,548 | 12,003 | 17,344 |
| 9 | Poona ... ... | Rayatwári .. .. | 205,771 | 7,425 | 715 | 245 | 6,133 | 692 | 125,796 | 36,466 | 76,393 | 19,018 | 478,654 | 11,228 | 213,479 | 82,828 | 25,660 | 23,927 | 2,900 | 17,842 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 41,803 | 432 | 48 | 16 | 824 | 61 | 22,521 | 6,131 | 11,994 | 2,717 | 86,547 | 1,774 | 22,914 | 12,204 | 2,702 | 4,732 | 308 | 4,168 |
| | | Total ... | 247,574 | 7,857 | 763 | 261 | 6,957 | 753 | 148,317 | 42,597 | 88,387 | 21,735 | 565,201 | 13,002 | 236,393 | 95,032 | 28,362 | 28,659 | 3,208 | 22,010 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. | 179,157 | 10,127 | 721 | 278 | 7,358 | 2,898 | 107,017 | 34,936 | 95,389 | 23,080 | 460,961 | 11,249 | 249,460 | 73,981 | 3,740 | 15,561 | 531 | 11,478 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 12,429 | 991 | 132 | 21 | 387 | 113 | 8,187 | 2,008 | 6,435 | 1,517 | 32,220 | 1,792 | 26,853 | 6,875 | 306 | 1,136 | 32 | 519 |
| | | Total ... | 191,586 | 11,118 | 853 | 299 | 7,745 | 3,011 | 115,204 | 36,944 | 101,824 | 24,597 | 493,181 | 12,041 | 276,313 | 80,856 | 4,046 | 16,697 | 563 | 11,997 |
| 11 | Sátára ... ... | Rayatwári .. .. | 190,268 | 16,410 | 281 | 145 | 4,466 | 986 | 114,154 | 59,883 | 77,664 | 38,111 | 502,368 | 12,782 | 316,209 | 69,234 | 19,570 | 19,316 | 764 | 18,088 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 44,162 | 4,496 | 164 | 49 | 965 | 214 | 25,711 | 15,082 | 17,268 | 8,878 | 116,989 | 2,006 | 54,825 | 14,901 | 5,633 | 4,250 | 151 | 4,342 |
| | | Total ... | 234,430 | 20,906 | 445 | 194 | 5,431 | 1,200 | 139,865 | 74,965 | 94,932 | 46,989 | 619,357 | 14,788 | 371,034 | 84,135 | 25,203 | 23,566 | 915 | 22,430 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. ... | 142,128 | 37,280 | 4,632 | 848 | 7,794 | 1,384 | 93,498 | 67,224 | 79,250 | 42,622 | 476,660 | 6,213 | 182,810 | 67,305 | 47,538 | 9,866 | 428 | 24,716 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 25,245 | 5,007 | 454 | 79 | 777 | 220 | 16,789 | 11,127 | 14,246 | 7,485 | 81,429 | 1,189 | 38,848 | 13,371 | 6,510 | 1,825 | 56 | 3,119 |
| | | Total ... | 167,373 | 42,287 | 5,086 | 927 | 8,571 | 1,604 | 110,287 | 78,351 | 93,496 | 50,107 | 558,089 | 7,402 | 221,658 | 80,676 | 54,048 | 11,691 | 484 | 27,835 |
| 13 | Bijápur... ... | Rayatwári .. .. | 172,898 | 9,531 | 182 | 154 | 5,132 | 3,420 | 115,165 | 54,574 | 149,602 | 50,039 | 560,697 | 11,109 | 186,824 | 118,059 | 40,972 | 9,686 | 158 | 12,890 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | 23,744 | 1,256 | 17 | 18 | 490 | 395 | 16,718 | 7,256 | 19,457 | 6,899 | 76,250 | 1,163 | 27,382 | 18,185 | 6,835 | 1,092 | 17 | 1,388 |
| | | Total ... | 196,642 | 10,787 | 199 | 172 | 5,622 | 3,815 | 131,883 | 61,830 | 169,059 | 56,938 | 636,947 | 12,272 | 214,206 | 136,241 | 47,807 | 10,778 | 175 | 14,278 |
| 14 | Dhárwár ... | Rayatwári .. .. | 196,074 | 22,884 | 408 | 240 | 11,773 | 1,536 | 105,561 | 71,060 | 136,314 | 58,871 | 604,721 | 5,182 | 123,309 | 84,842 | 87,851 | 5,279 | 457 | 45,128 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. . | 14,292 | 2,888 | 13 | 12 | 651 | 57 | 9,265 | 4,883 | 11,722 | 4,135 | 47,918 | 429 | 4,196 | 5,386 | 6,996 | 249 | 17 | 2,974 |
| | | Total ... | 210,366 | 25,772 | 421 | 252 | 12,424 | 1,593 | 114,826 | 75,943 | 148,036 | 63,006 | 652,639 | 5,611 | 127,505 | 90,228 | 94,847 | 5,528 | 474 | 48,102 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári .. .. | 131,592 | 46,262 | 1,030 | 181 | 5,078 | 586 | 115,233 | 22,706 | 109,152 | 18,359 | 4,50,179 | 1,281 | 2,926 | 43,976 | 82,140 | .... | 4,097 | 24,317 |
| | | Other Government . | 950 | 423 | 381 | 24 | 37 | .. | 1,254 | 165 | 814 | 107 | 4,155 | 48 | 107 | 326 | 702 | .... | 17 | 130 |
| | | Alienated .. .. | 3,174 | 715 | 3 | 2 | 94 | 21 | 1,286 | 326 | 1,191 | 155 | 6,967 | 20 | 30 | 665 | 1,646 | .... | 95 | 818 |
| | | Total ... | 135,716 | 47,400 | 1,414 | 207 | 5,209 | 607 | 117,773 | 23,197 | 111,157 | 18,621 | 461,301 | 1,349 | 3,063 | 44,967 | 84,488 | ... | 4,209 | 25,265 |
| 16 | Kolába ... ... | Rayatwári .. .. | 37,430 | 18,486 | 298 | 172 | 2,350 | 518 | 32,486 | 11,491 | 29,555 | 8,915 | 141,701 | 526 | 672 | 14,892 | 25,198 | .... | 1,156 | 4,639 |
| | | Other Government . | 30,419 | 11,824 | 150 | 62 | 515 | 153 | 26,025 | 6,509 | 19,310 | 4,376 | 99,343 | 83 | 632 | 10,116 | 20,342 | .... | 91 | 659 |
| | | Alienated .. .. | 337 | 216 | .. | .. | .... | .. | 300 | 54 | 256 | 54 | 1,217 | 1 | .... | 189 | 242 | .... | 8 | 9 |
| | | Total ... | 68,186 | 30,526 | 448 | 234 | 2,865 | 671 | 58,811 | 18,054 | 49,121 | 13,345 | 242,261 | 610 | 1,304 | 25,197 | 45,782 | ... | 1,255 | 5,307 |
| 17 | Ratnágiri ... | Rayatwári .. .. | 12,782 | 2,707 | 29 | 39 | 1,550 | 155 | 7,230 | 2,633 | 3,530 | 1,393 | 32,048 | 35 | 221 | 2,386 | 7,663 | .... | 29 | 865 |
| | | Other Government . | 78,660 | 15,844 | 510 | 49 | 601 | 314 | 47,247 | 11,433 | 23,356 | 6,310 | 184,324 | 134 | 2,563 | 12,216 | 44,970 | .... | 61 | 343 |
| | | Alienated .. .. | 1,958 | 557 | 2 | 1 | .... | .. | 1,136 | 379 | 689 | 227 | 4,949 | 5 | .... | 817 | 1,231 | .... | .. | 20 |
| | | Total ... | 93,400 | 19,108 | 541 | 89 | 2,151 | 469 | 55,613 | 14,445 | 27,575 | 7,930 | 221,321 | 174 | 2,784 | 15,419 | 53,864 | ... | 90 | 1,228 |
| 18 | Kánara... ... | Rayatwári .. .. | 79,718 | 26,447 | 2,334 | 234 | 6,142 | 1,127 | 79,692 | 26,948 | 54,212 | 10,853 | 287,707 | 337 | 1,517 | 3,489 | 46,453 | .... | 86 | 5,653 |
| | | Other Government . | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Alienated .. .. | .... | .... | .. | .. | .... | .. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .. | .. |
| | | Total ... | 79,718 | 26,447 | 2,334 | 234 | 6,142 | 1,127 | 79,692 | 26,948 | 54,212 | 10,853 | 287,707 | 337 | 1,517 | 3,489 | 46,453 | ... | 86 | 5,653 |
| | Total A ... | Rayatwári .. .. | 2,504,142 | 2,81,099 | 21,820 | 4,817 | 1,05,362 | 18,274 | 1,590,658 | 755,376 | 1,309,236 | 4,90,849 | 7,031,631 | 122,928 | 1,730,471 | 1,065,485 | 740,729 | 164,590 | 78,244 | 344,000 |
| | | Other Government . | 229,176 | 28,268 | 1,424 | 484 | 3,522 | 860 | 149,099 | 87,631 | 91,788 | 48,211 | 640,463 | 4,352 | 31,074 | 51,095 | 124,572 | 334 | 1,236 | 22,209 |
| | | Alienated .. .. | 236,938 | 18,180 | 1,387 | 319 | 6,692 | 1,378 | 145,827 | 59,709 | 1,12,872 | 38,311 | 621,615 | 11,669 | 217,271 | 102,813 | 50,360 | 20,435 | 3,333 | 24,062 |
| | Grand Total ... | | 2,970,256 | 277,547 | 24,631 | 5,620 | 115,576 | 20,512 | 1,885,584 | 902,716 | 1,513,896 | 577,371 | 8,293,709 | 138,949 | 1,978,816 | 1,219,393 | 915,661 | 185,359 | 82,813 | 390,271 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... .. ... | | Not available. | | | | | | | | | | | | | | | | | |
| 20 | Hyderabad... .. ... ... | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur ... ... ... ... | | | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier ... ... | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar ... ... ... | | | | | | | | | | | | | | | | | | | |

# Accompaniment A to Return III.

*Details of Kharíf and Rabi under Cereals and Pulses, 1889-90.*

| No. | District. | | Class I.—(Cereals). | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári, Sorghum Vulgare. | Bájri, Pennisetum Typhoideum. | Rice. | Wheat. | Barley. | Maize. | Kodra, Paspalum Scrobiculatum. | Rági, Eleusine Coracana. | Rále, Panicum Italicum. | Vari, P. Miliare. | Banti, P. flavidum. | Bhádli, P. pilosum. | Rájgira, amaranth. | Others. | Total Cereals. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... | Kharif ... | 340,471 | 241,315 | 62,286 | ..... | ..... | 3,452 | 21,199 | 3,101 | ..... | 8,605 | 21,652 | ..... | ..... | ..... | 702,081 |
| | | Rabi .. .. | ..... | ..... | ..... | 169,206 | 19,627 | ..... | ..... | ..... | 408 | ..... | ..... | ..... | 26 | ..... | 189,267 |
| | | Total ... | 340,471 | 241,315 | 62,286 | 169,206 | 19,627 | 3,452 | 21,199 | 3,101 | 408 | 8,605 | 21,652 | ... | 26 | ... | 891,348 |
| 2 | Kaira ... ... | Kharif ... | 60,930 | 207,478 | 116,387 | ..... | ..... | 320 | 117,863 | 56,326 | ..... | ..... | 1,781 | ..... | ..... | 11 | 561,096 |
| | | Rabi ... ... | 1,430 | 55 | ..... | 17,552 | 6,558 | ..... | ..... | ..... | 377 | 661 | 41 | ..... | 114 | ..... | 26,788 |
| | | Total ... | 62,360 | 207,533 | 116,387 | 17,552 | 6,558 | 320 | 117,863 | 56,326 | 377 | 661 | 1,822 | ... | 114 | 11 | 587,884 |
| 3 | Panch Maháls ... | Kharif ... | 5,681 | 42,043 | 50,166 | ..... | ..... | 87,003 | 24,164 | 15,135 | 35 | 2,584 | 16,450 | 627 | 16 | 2,308 | 246,212 |
| | | Rabi ... ... | 2 | 6 | ..... | 17,194 | 1,364 | 14 | ..... | ..... | ..... | 2 | 1 | ..... | 4 | ..... | 18,587 |
| | | Total ... | 5,683 | 42,049 | 50,166 | 17,194 | 1,364 | 87,017 | 24,164 | 15,135 | 35 | 2,586 | 16,451 | 627 | 20 | 2,308 | 264,799 |
| 4 | Broach ... ... | Kharif ... | 14,262 | 17,372 | 19,512 | ..... | ..... | 9 | 10,049 | 237 | 30 | 249 | 4 | ..... | 21 | 1 | 61,746 |
| | | Rabi ... ... | 114,803 | ..... | ..... | 54,819 | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 169,625 |
| | | Total ... | 129,065 | 17,372 | 19,512 | 54,819 | ... | 9 | 10,049 | 240 | 30 | 249 | 4 | ... | 21 | 1 | 231,371 |
| 5 | Surat ... ... | Kharif ... | 122,173 | 7,969 | 102,983 | ..... | ..... | 2 | 31,835 | 13,489 | 1 | 63 | 1,567 | 111 | 2 | 240 | 280,435 |
| | | Rabi ... ... | 520 | ..... | ..... | 23,341 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 23,861 |
| | | Total ... | 122,693 | 7,969 | 102,983 | 23,341 | ... | 2 | 31,835 | 13,489 | 1 | 63 | 1,567 | 111 | 2 | 240 | 304,296 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Kharif ... | 572,379 | 724,073 | 24,760 | ..... | ..... | 3,098 | 4,489 | 11,413 | 461 | 4,986 | 3,840 | 1,612 | 311 | 37 | 1,351,459 |
| | | Rabi ... ... | ..... | ..... | ..... | 219,487 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 219,491 |
| | | Total ... | 572,379 | 724,073 | 24,760 | 219,487 | 4 | 3,098 | 4,489 | 11,413 | 461 | 4,986 | 3,840 | 1,612 | 311 | 37 | 1,570,950 |
| 7 | Násik ... ... | Kharif ... | 130,314 | 794,422 | 47,962 | ..... | ..... | 2,968 | 2 | 151,841 | 192 | 47,054 | 713 | 3,485 | 107 | ..... | 1,179,060 |
| | | Rabi ... ... | 15,648 | ..... | ..... | 340,988 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 356,636 |
| | | Total ... | 145,962 | 794,422 | 47,962 | 340,988 | ... | 2,968 | 2 | 151,841 | 192 | 47,054 | 713 | 3,485 | 107 | ... | 1,535,696 |
| 8 | Ahmadnagar ... | Kharif ... | ..... | 960,237 | 12,883 | ..... | 135 | 1,119 | 190 | 29,391 | 1,821 | 13,171 | 9 | 5,494 | ..... | 856 | 1,025,306 |
| | | Rabi ... ... | 1,017,363 | ..... | ..... | 238,133 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 424 | ..... | 1,255,920 |
| | | Total ... | 1,017,363 | 960,237 | 12,883 | 238,133 | 135 | 1,119 | 190 | 29,391 | 1,821 | 13,171 | 9 | 5,494 | 424 | 856 | 2,281,226 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... | Kharif ... | 106,895 | 501,327 | 62,423 | ..... | 158 | 1,750 | 30 | 61,339 | 2,471 | 36,895 | 110 | 7,776 | 383 | 3,899 | 785,456 |
| | | Rabi ... | 773,253 | 74,782 | ..... | 120,092 | 1,016 | 29 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 969,172 |
| | | Total ... | 880,148 | 576,109 | 62,423 | 120,092 | 1,174 | 1,779 | 30 | 61,339 | 2,471 | 36,895 | 110 | 7,776 | 383 | 3,899 | 1,754,628 |
| 10 | Sholápur ... | Kharif ... | ..... | 316,168 | 21,764 | ..... | ..... | 13,737 | 22 | 63 | 1,422 | 1,551 | ..... | 232 | 57 | 8,992 | 364,008 |
| | | Rabi ... | 1,229,506 | ..... | ..... | 61,041 | 1,361 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,291,908 |
| | | Total ... | 1,229,506 | 316,168 | 21,764 | 61,041 | 1,361 | 13,737 | 22 | 63 | 1,422 | 1,551 | ... | 232 | 57 | 8,992 | 1,655,916 |
| 11 | Sátára ... | Kharif ... | 316,785 | 588,697 | 41,170 | ..... | ..... | 7,120 | 167 | 69,780 | 30,509 | 52,285 | 12 | ..... | 756 | 2,195 | 1,109,476 |
| | | Rabi ... | 205,086 | ..... | ..... | 72,100 | 5,245 | 2,872 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 285,303 |
| | | Total ... | 521,871 | 588,697 | 41,170 | 72,100 | 5,245 | 9,992 | 167 | 69,780 | 30,509 | 52,285 | 12 | ... | 756 | 2,195 | 1,394,779 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Kharif ... | 485,896 | 121,970 | 112,223 | ..... | 2 | 6,343 | 177 | 55,842 | 69,047 | 31,226 | 79 | ..... | 14 | 1 | 882,820 |
| | | Rabi ... | 287,434 | ..... | ..... | 124,833 | 352 | 743 | 2 | 1 | 2,132 | ..... | ..... | ..... | ..... | 21 | 415,518 |
| | | Total ... | 773,330 | 121,970 | 112,223 | 124,833 | 354 | 7,086 | 179 | 55,843 | 71,179 | 31,226 | 79 | ... | 14 | 22 | 1,298,338 |
| 13 | Bijápur ... | Kharif ... | 519,807 | 355,605 | 11,397 | ..... | ..... | 647 | 38 | 127 | 26,779 | 7,391 | ..... | ..... | 3 | 5 | 921,799 |
| | | Rabi ... | 779,828 | ..... | ..... | 182,852 | 16 | 77 | ..... | ..... | 1,696 | ..... | ..... | ..... | ..... | 2 | 964,471 |
| | | Total ... | 1,299,635 | 355,605 | 11,397 | 182,852 | 16 | 724 | 38 | 127 | 28,475 | 7,391 | ... | ... | 3 | 7 | 1,886,270 |
| 14 | Dhárwár ... | Kharif ... | 417,339 | 5,401 | 154,875 | ..... | 22 | 32 | 33 | 46,940 | 87,755 | 32,493 | ..... | ..... | ..... | ..... | 744,890 |
| | | Rabi ... | 179,130 | ..... | ..... | 282,506 | ..... | ..... | ..... | ..... | 4,187 | 97 | ..... | ..... | ..... | ..... | 465,920 |
| | | Total .. | 596,469 | 5,401 | 154,875 | 282,506 | 22 | 32 | 33 | 46,940 | 91,942 | 32,590 | ... | ... | ... | ... | 1,210,810 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Kharif ... | 30 | ..... | 336,784 | 141 | ..... | 86 | 13,846 | 74,074 | ..... | 33,535 | ..... | ..... | ..... | ..... | 458,496 |
| | | Rabi ... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| | | Total ... | 30 | ... | 336,784 | 143 | ... | 86 | 13,846 | 74,074 | ... | 33,535 | ... | ... | ... | ... | 458,498 |
| 16 | Kolába ... | Kharif ... | ..... | ..... | 197,098 | ..... | ..... | ..... | 18,578 | 55,904 | ..... | 44,623 | ..... | ..... | ..... | ..... | 316,203 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 197,098 | ... | ... | ... | 18,578 | 55,904 | ... | 44,623 | ... | ... | ... | ... | 316,203 |
| 17 | Ratnágiri ... | Kharif ... | ..... | ..... | 136,355 | ..... | ..... | ..... | 99,952 | 108,128 | 2 | 77,140 | ..... | ..... | ..... | 98 | 421,675 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 136,355 | ... | ... | ... | 99,952 | 108,128 | 2 | 77,140 | ... | ... | ... | 98 | 421,675 |
| 18 | Kánara ... | Kharif ... | 923 | ..... | 179,850 | ..... | ..... | 8 | ..... | 6,062 | 108 | 360 | ..... | ..... | ..... | ..... | 187,311 |
| | | Rabi ... | ..... | ..... | 13,607 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 13,607 |
| | | Total ... | 923 | ... | 193,457 | ... | ... | 8 | ... | 6,062 | 108 | 360 | ... | ... | ... | ... | 200,918 |
| | Grand Total ... | Kharif ... | 3,093,885 | 4,884,077 | 1,690,878 | 141 | 317 | 127,694 | 342,634 | 759,192 | 220,633 | 394,211 | 46,217 | 19,337 | 1,670 | 18,643 | 11,599,529 |
| | | Rabi ... | 4,604,003 | 74,843 | 13,607 | 1,924,146 | 35,543 | 3,735 | 2 | 4 | 8,800 | 760 | 42 | ..... | 568 | 23 | 6,666,076 |
| | | Total ... | 7,697,888 | 4,958,920 | 1,704,485 | 1,924,287 | 35,860 | 131,429 | 342,636 | 759,196 | 229,433 | 394,971 | 46,259 | 19,337 | 2,238 | 18,666 | 18,265,605 |

## ACCOMPANIMENT A. TO RETURN III—*continued.*

*Details of Kharíf and Rabi under Cereals and Pulses, 1889-90.*

| No | District. | | CLASS II.—(PULSES). | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur, Cajanus Indicus. | Gram, Cicer arietinum. | Mug, Phaseolus mungo. | Udid, P. radiatus. | Math, P. aconitifolius. | Val, Dolichos lablab. | Chavli, D. catiang. | Kulith, D. uniflorus. | Vátáne, Pisum sativum. | Lentil (Masur). | Lákh, Chickling vetch. | Field Vetch (Guvár). | Others. | Total Pulses. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad... ... ... | Kharif ... | 1,957 | ..... | 10,792 | 4,989 | 43,425 | 99 | 957 | 5,354 | ..... | ..... | ..... | 6,311 | ..... | 73,884 |
| | | Rabi ... | ..... | 11,275 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 11,275 |
| | | Total ... | 1,957 | 11,275 | 10,792 | 4,989 | 43,425 | 99 | 957 | 5,354 | ... | ... | ... | 6,311 | ... | 85,159 |
| 2 | Kaira ... ... ... | Kharif ... | 26,427 | ..... | 3,681 | 817 | 28,827 | 752 | 4,273 | ..... | ..... | ..... | ..... | 11,918 | ..... | 76,695 |
| | | Rabi ... ... | ..... | 4,385 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4,385 |
| | | Total ... | 26,427 | 4,385 | 3,681 | 817 | 28,827 | 752 | 4,273 | ... | ... | ... | ... | 11,918 | ... | 81,080 |
| 3 | Panch Maháls ... ... | Kharif ... | 6,357 | ..... | 3,419 | 6,646 | 3,667 | 165 | 593 | 33 | ..... | ..... | ..... | 1,054 | ..... | 21,934 |
| | | Rabi ... ... | ..... | 50,602 | ..... | ..... | ..... | ..... | ..... | ..... | 1,774 | ..... | ..... | ..... | ..... | 52,376 |
| | | Total ... | 6,357 | 50,602 | 3,419 | 6,646 | 3,667 | 165 | 593 | 33 | 1,774 | ... | ... | 1,054 | ... | 74,310 |
| 4 | Broach ... ... ... | Kharif ... | 3,042 | ..... | 260 | 11 | 2,963 | 144 | 89 | ..... | ..... | ..... | ..... | 236 | ..... | 6,745 |
| | | Rabi ... ... | 14,789 | 1,426 | 7 | ..... | 25 | 788 | 173 | ..... | 814 | ..... | 37,476 | 68 | 2 | 55,568 |
| | | Total ... | 17,831 | 1,426 | 267 | 11 | 2,988 | 932 | 262 | ... | 814 | ... | 37,476 | 304 | 2 | 62,313 |
| 5 | Surat ... ... ... | Kharif ... | 23,976 | ..... | 3,477 | 2,505 | 405 | 299 | 769 | ..... | ..... | ..... | ..... | 2,239 | ..... | 33,670 |
| | | Rabi ... ... | 3,105 | 2,306 | 103 | ..... | ..... | 40,719 | 43 | ..... | 2,347 | 6 | 3,657 | ..... | ..... | 52,286 |
| | | Total ... | 27,081 | 2,306 | 3,580 | 2,505 | 405 | 41,018 | 812 | ... | 2,347 | 6 | 3,657 | 2,239 | ... | 85,956 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | Kharif ... | 57,802 | ..... | 5,451 | 21,309 | 2,698 | 179 | 904 | 59,334 | ..... | 745 | ..... | ..... | ..... | 148,422 |
| | | Rabi ... ... | ..... | 35,789 | ..... | ..... | ..... | ..... | ..... | ..... | 2,282 | ..... | 160 | ..... | ..... | 38,231 |
| | | Total ... | 57,802 | 35,789 | 5,451 | 21,309 | 2,698 | 179 | 904 | 59,334 | 2,282 | 745 | 160 | ... | ... | 186,653 |
| 7 | Násik ... ... ... | Kharif ... | 25,233 | ..... | 998 | 22,611 | 1,153 | 1 | 113 | 69,682 | ..... | ..... | ..... | ..... | ..... | 119,807 |
| | | Rabi ... ... | ..... | 68,403 | ..... | ..... | ..... | ..... | ..... | ..... | 2,104 | 9,370 | 3,432 | ..... | ..... | 83,309 |
| | | Total ... | 25,233 | 68,403 | 998 | 22,611 | 1,153 | 17 | 113 | 69,682 | 2,104 | 9,370 | 3,432 | ... | ... | 203,116 |
| 8 | Ahmadnagar ... ... | Kharif ... | 41,077 | ..... | 8,463 | 1,901 | 18,960 | 851 | ..... | 40,628 | 1,057 | 429 | ..... | ..... | 39 | 113,405 |
| | | Rabi ... .. | ..... | 106,356 | ..... | ..... | ..... | ..... | 78 | ..... | ..... | ..... | 134 | ..... | ..... | 106,568 |
| | | Total ... | 41,077 | 106,356 | 8,463 | 1,901 | 18,960 | 851 | 78 | 40,628 | 1,057 | 429 | 134 | ... | 39 | 219,973 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... ... | Kharif ... | 23,038 | ..... | 1,836 | 4,537 | 21,055 | 137 | 21 | 26, 1 | 165 | 6 | ..... | ..... | ..... | 77,739 |
| | | Rabi ... ... | ..... | 82,575 | ..... | ..... | ..... | 5,114 | 80 | 1,557 | 1,884 | 1,376 | ..... | ..... | ..... | 92,586 |
| | | Total ... | 23,038 | 82,575 | 1,836 | 4,537 | 21,055 | 5,251 | 294 | 28,308 | 2,049 | 1,382 | ... | ... | ... | 170,325 |
| 10 | Sholápur ... ... ... | Kharif ... | 79,609 | ..... | 5,832 | 859 | 44,094 | 72 | 29 | 17,675 | ..... | ..... | ..... | ..... | ..... | 148,170 |
| | | Rabi ... ... | ..... | 67,617 | ..... | ..... | ..... | ..... | ..... | ..... | 50 | 74 | 396 | ..... | 10 | 68,147 |
| | | Total ... | 79,609 | 67,617 | 5,832 | 859 | 44,094 | 72 | 29 | 17,675 | 50 | 74 | 396 | ... | 10 | 216,317 |
| 11 | Sátára ... ... ... | Kharif ... | 65,281 | ..... | 12,934 | 31,781 | 65,409 | 4,499 | 432 | 48,238 | ..... | ..... | ..... | ..... | 1 | 228,575 |
| | | Rabi ... ... | ..... | 96,681 | ..... | ..... | ..... | ..... | ..... | ..... | 1,445 | 550 | ..... | ..... | ..... | 98,676 |
| | | Total ... | 65,281 | 96,681 | 12,934 | 31,781 | 65,409 | 4,499 | 432 | 48,238 | 1,445 | 550 | ... | ... | 1 | 327,251 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | Kharif ... | 58,336 | ..... | 7,414 | 4,182 | 4,342 | 273 | 229 | 47,337 | ..... | ..... | ..... | ..... | ..... | 122,113 |
| | | Rabi ... ... | ..... | 54,853 | ..... | ..... | ..... | 6,624 | ..... | ..... | 5,638 | 5,280 | ..... | ..... | ..... | 72,395 |
| | | Total ... | 58,336 | 54,853 | 7,414 | 4,182 | 4,342 | 6,897 | 229 | 47,337 | 5,638 | 5,280 | ... | ... | ... | 194,508 |
| 13 | Bijápur ... ... ... | Kharif ... | 111,168 | ..... | 43,176 | 2 | 11,735 | 3,207 | 4,106 | 34,147 | 11 | ..... | ..... | ..... | ..... | 207,552 |
| | | Rabi ... ... | ..... | 53,418 | ..... | ..... | ..... | 1,005 | ..... | ..... | 33 | ..... | ..... | ..... | ..... | 54,456 |
| | | Total ... | 111,168 | 53,418 | 43,176 | 2 | 11,735 | 4,212 | 4,106 | 34,147 | 44 | ... | ... | ... | ... | 262,008 |
| 14 | Dhárwár ... ... ... | Kharif ... | 49,620 | 31 | 32,557 | 4,037 | 9,204 | 4,270 | 856 | 39,056 | ..... | ..... | ..... | ..... | ..... | 139,631 |
| | | Rabi ... ... | 1 | 48,698 | 5,863 | 881 | ..... | 1,519 | 9 | 5,999 | 650 | 95 | ..... | ..... | ..... | 63,715 |
| | | Total ... | 49,621 | 48,729 | 38,420 | 4,918 | 9,204 | 5,789 | 865 | 45,055 | 650 | 95 | ... | ... | ... | 203,346 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... | Kharif ... | 7,198 | 793 | 547 | 21,782 | ..... | 808 | 4,379 | 1,796 | 4 | ..... | ..... | ..... | ..... | 37,307 |
| | | Rabi ... ... | 616 | 2,036 | 83 | ..... | ..... | 3,457 | ..... | ..... | 139 | ..... | 100 | ..... | ..... | 6,431 |
| | | Total ... | 7,814 | 2,829 | 630 | 21,782 | ... | 4,265 | 4,379 | 1,796 | 143 | ... | 100 | ... | ... | 43,738 |
| 16 | Kolába ... ... ... | Kharif ... | 332 | ..... | ..... | 1,889 | ..... | 123 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2,344 |
| | | Rabi ... ... | 1,703 | 2,859 | 2,349 | 5,087 | 9 | 7,008 | 97 | 10 | ..... | ..... | ..... | ..... | ..... | 19,122 |
| | | Total ... | 2,035 | 2,859 | 2,349 | 6,976 | 9 | 7,131 | 97 | 10 | ... | ... | ... | ... | ... | 21,466 |
| 17 | Ratnágiri ... ... ... | Kharif ... | 2,326 | 92 | 1,174 | 9,396 | ..... | 10,138 | 313 | 11,961 | ..... | ..... | ..... | ..... | ..... | 35,400 |
| | | Rabi ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,326 | 92 | 1,174 | 9,396 | ... | 10,138 | 313 | 11,961 | ... | ... | ... | ... | ... | 35,400 |
| 18 | Kánara ... ... ... | Kharif ... | 111 | ..... | 7 | 370 | ..... | 2 | ..... | 1,588 | ..... | ..... | ..... | ..... | ..... | 2,078 |
| | | Rabi ... ... | ..... | 305 | 1,251 | 1,362 | ..... | 97 | 633 | 375 | 469 | ..... | ..... | ..... | 50 | 4,542 |
| | | Total ... | 111 | 305 | 1,258 | 1,732 | ... | 99 | 633 | 1,963 | 469 | ... | ... | ... | 50 | 6,620 |
| | Grand Total ... | Kharif ... | 582,890 | 916 | 142,018 | 139,624 | 257,937 | 26,035 | 18,256 | 403,580 | 1,237 | 1,180 | ..... | 21,758 | 40 | 1,595,471 |
| | | Rabi ... ... | 20,214 | 689,584 | 9,656 | 7,330 | 34 | 66,331 | 1,113 | 7,941 | 19,629 | 16,751 | 45,355 | 68 | 62 | 884,068 |
| | | Total ... | 603,104 | 690,500 | 151,674 | 146,954 | 257,971 | 92,366 | 19,369 | 411,521 | 20,866 | 17,931 | 45,355 | 21,826 | 102 | 2,479,539 |

## Accompaniment B. to Return III.

*Number of principal Fruit-bearing Trees, 1889-90.*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy Palm. | Date Palm. |
|---|---|---|---|---|---|---|---|
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadadad... ... | 44,927 | 10,313 | ... | ... | 43 | ... |
| 2 | Káira ... ... | 217,666 | 21,226 | ... | 32 | 15 | ... |
| 3 | Panch Maháls ... | 40,782 | 5,565 | ... | ... | 131,284 | ... |
| 4 | Broach ... ... | 20,418 | 6,386 | 8 | 81 | 32,746 | 1,268 |
| 5 | Surat ... ... | 174,415 | 72,138 | 3,719 | 6,522 | 71,878 | 625,808 |
| | Total ... | 498,208 | 115,628 | 3,727 | 6,635 | 235,966 | 627,076 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 168,325 | 12,260 | 3 | 99 | 250 | 2,262 |
| 7 | Násik ... ... | 221,811 | 7,245 | 45 | 195 | 38 | 42,944 |
| 8 | Ahmadnagar ... | 64,006 | 8,642 | 15 | 245 | ... | 1,032 |
| 9 | Poona ... ... | 118,861 | 7,552 | 740 | 1,388 | 8,693 | ... |
| 10 | Sholápur ... ... | 31,297 | 6,453 | ... | 117 | 2 | 66,935 |
| 11 | Sátára ... ... | 166,207 | 11,026 | 9,832 | 1,620 | ... | 1 |
| | Total ... | 770,507 | 53,178 | 10,635 | 3,664 | 8,983 | 113,174 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 116,553 | 20,462 | 10,199 | 1,815 | ... | 7,200 |
| 13 | Bijápur ... ... | 72,224 | 24,262 | 47 | 1,964 | 116 | 420,721 |
| 14 | Dhárwár ... ... | 162,096 | 55,693 | 8,568 | 62,702 | 4 | 499,435 |
| | Total ... | 350,873 | 100,417 | 18,814 | 66,481 | 120 | 927,356 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... | 171,458 | 12,825 | 2,903 | 87,861 | 69,362 | 12,528 |
| 16 | Kolába ... ... | 72,176 | 4,273 | 4,594 | 89,772 | 19,384 | 30 |
| 17 | Ratnágiri ... ... | 154,861 | 9,602 | 85,660 | 277,170 | ... | ... |
| 18 | Kánara ... ... | 110,367 | 11,954 | 80,915 | 1,019,389 | ... | ... |
| | Total ... | 508,862 | 38,654 | 174,072 | 1,474,192 | 88,746 | 12,558 |
| | Grand Total ... | 2,128,450 | 307,877 | 207,248 | 1,550,972 | 333,815 | 1,680,164 |

# STATISTICS.

## B.—RAINFALL.

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | 1st January—10th April. |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini ... ... | 11th April—24th April. |
| | Bharani ... ... | 25th April—8th May. |
| | Krittika ... ... | 9th May—22nd May. |
| | Rohini ... ... | 23rd May—4th June. |
| Monsoon-Kharíf— | | |
| 5th June to 14th August. | Mrig ... ... ... | 5th June—19th June. |
| | Ardra ... ... | 20th June—3rd July. |
| | Punarvasu ... ... | 4th July—17th July. |
| | Pushya ... ... | 18th July—31st July. |
| | Áshlesha ... ... | 1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct. | Magha ... ... | 15th August—27th August. |
| | Purva ... ... | 28th August—10th September. |
| | Uttara ... ... | 11th September—24th September. |
| | Hast ... ... ... | 25th September—7th October. |
| | Chitra ... ... | 8th October—21st October. |
| Late Rains— | | |
| 22nd Oct. to 30th Nov.... | Sváti ... ... ... | 22nd October—3rd November. |
| | Vishákha ... ... | 4th November—17th November. |
| | Anurádha ... ... | 18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1886, except for very few stations. The rainy days are compared with those of the last year.

The anna valuation given in the remarks is on the basis of 16 annas representing an average crop.

## Synopsis of Rainfall Summary, 1889.

| District. | Kharíf. | | Rabi. | | General Remarks as to Rain. |
|---|---|---|---|---|---|
| | Rain. | Harvest. | Rain. | Harvest. | |
| West Khándesh ... | Seasonable ... | Good ... ... | Light ... ... | Poor ... ... | Much below average. Hast rain failed. Sindkheda fared worst. |
| East Khándesh ... | Very seasonable. | Very good ... | Sowing rain good but none after. | Very poor ... | Below average. Cotton and jowári excellent. Oilseeds good. |
| Násik ... ... | Short. Long breaks. | Crops fair (except Sinnar and Niphád). | Do. ... | Poor ... ... | Below average. Injurious Chitra rain in Yeola. |
| Ahmadnagar ... | Seasonable and good. | Good, but area short in south-east. | Too heavy at first. Too light after. | Fair ... ... | Up to or above average. Hast and Chitra too heavy. |
| Poona ... .. | Late and scant in east except Indápur. | Good in west and in Indápur. Poor elsewhere. | Good at first ... | Fair to average . | Up to or above average. Hast very good. Chitra, however, injuriously heavy. |
| Sholápur ... ... | Excellent but harmful harvest rain in Chitra. | Poor ; poorest in Karmála and Sángola. | Unseasonable ... | Fair ... ... | Up to or much above average ; but unseasonable owing to heavy Chitra rain. |
| Sátára ... ... | Good, especially in Uttara. | Good ... ... | Hast good, but later rains altogether absent except in Chitra | Do. ... ... | Above average. Chitra rain at kharíf harvest prevented full crop and submerged rabi seedlings. |
| Belgaum ... ... | Good, except in Athni, Gokák and Saundatti. | Good, but area short. | Do. ... | Fair to good in tálukas where kharíf short. | Up to or above average. Chitra rain very harmful. |
| Bijápur ... ... | Excellent, but excessive Chitra rain at harvest. | Fair to good ... | Do. ... | Good ... ... | Much above average. Chitra especially harmfully excessive. |
| Dhárwár ... ... | Late in north and deficient everywhere till Uttara | Fair ... ... | Do. ... | Fair ... ... | Up to or above average. Hast rain rather excessive and Chitra following did harm everywhere. |
| Kánara ... ... | Excessive ... | Do. ... ... | Excessive in Chitra. | Not a rabi district. | Much above average. |
| Ratnágiri ... ... | Seasonable. Slightly excessive for early rice. | Good ... ... | Good, but ceased too soon. | Very fair ... | Up to or above average. Chitra rain bad. |
| Kolába ... ... | Seasonable and good. | Do. ... ... | Seasonable ... | Good ... ... | Average. Chitra rain not excessive or injurious. |
| Thána ... ... | Do. ... | Do. ... .. | Do. ... | Do. ... ... | Average or a little below. |
| Surat ... ... | Do. ... | Do. ... ... | Do. ... | Do. ... ... | Much below average. |
| Broach ... ... | Do. ... | Excellent. Cotton bumper. | Do. ... | Very good ... | Below average. Locusts in October-November. No injury. |
| Kaira ... ... | Seasonable ... | Good ... ... | Light ... ... | Fair ... ... | Up to average. Hast rain very light. |
| Panch Maháls ... | Seasonable and good. | Very good ... | Hast good ... | Do. ... ... | Up to average. |
| Ahmadabad ... .. | Do. ... | Good ... .. | Very light ... | Do. ... ... | Below or up to average. Hast rain scant and rabi area short. |

## West Khándesh, 1889.

| Rain Periods. | Dhulia. | | Pimpalner. | | Nandurba'r. | | Nava'pur. | | Taloda. | | Sha'ha'da. | | Shirpur. | | Sindkheda. | | Amalner. | | Pa'rola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 0·35 | 3 | 0·66 | 1 | 2·04 | 3 | 1·31 | 2 | 2·02 | 3 | 1·82 | 3 | 1·08 | 4 | 0·30 | 2 | 0·86 | 4 | 0·20 | 2 |
| Monsoon-Kharíf .. | 11·04 | 30 | 7·79 | 25 | 9·42 | 28 | 18·99 | 39 | 20·30 | 27 | 9·92 | 30 | 10·96 | 35 | 4·58 | 16 | 15·73 | 35 | 16·40 | 35 |
| Monsoon-Rabi .. | 6·26 | 19 | 6·20 | 23 | 6·15 | 17 | 7·05 | 28 | 8·33 | 18 | 5·97 | 18 | 3·39 | 21 | 3·02 | 15 | 5·83 | 26 | 7·26 | 19 |
| Late Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 17·65 | 52 | 14·65 | 49 | 17·61 | 48 | 27·35 | 69 | 30·65 | 48 | 17·71 | 51 | 15·43 | 60 | 7·90 | 33 | 22·42 | 65 | 23·86 | 56 |
| Average .. | 25·79 | 54 | 27·42 | 48 | 32·67 | 55 | .. | 71 | 34·96 | 56 | 31·56 | 47 | 27·56 | 60 | 22·95 | 40 | 28·05 | 62 | 32·08 | 58 |

*General characteristics.*—A hilly and rugged tract except where the wide black soil plains extend on either side of the Tápti and its tributaries. Rainfall very heavy in the dángs.

*Remarks.*—Rainfall much below average. Light showers of Rohini in May were useful for preparing the land. Monsoon broke in Mrig in 2nd week of June, with fair showers sufficient to commence partial sowings. General sowing rain came about the middle of July (16th—20th). Subsequent break was favourable for completing kharíf sowings and for weeding, and was well relieved by fairly heavy showers of Ashlesha in 2nd week of August. The rainfall of monsoon rabi both in Uttara and Hast in September-October was as a rule light and insufficient. Kharíf crops suffered considerably in outturn. Rabi was sown to a small extent, and its outturn was poor. On the whole kharíf cotton, jowári and bájri were fairly average crops, being estimated at from 12 to 15 annas; and rábi a poor crop, estimated at 4 to 8 annas. The Collector remarks:—"In a considerable area in the west centre of Khándesh the rainfall was unusually small. Sindkheda was about the centre of this tract, which included, besides that táluka, west Dhulia, east Pimpalner, a large part of Nandurbár, south Sháháda and the greater part of Shirpur. In part of this area there was a good deal of difficulty in getting fodder for cattle." It was also in this part that the crops were especially poor.

## East Khándesh, 1889.

| Rain Periods. | Chálisgaon. | | Páchora. | | Bhadgaon. | | Erandol. | | Chopda. | | Jalgaon. | | Jámner. | | Bhusával. | | Edalabad. | | Sávda. | | Yával. | | Ráver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | .. | .. | 0·44 | 3 | 0·47 | 3 | .. | .. | 0·47 | 2 | 1·59 | 3 | 1·70 | 3 | 1·49 | 2 | 0·50 | 2 | 0·55 | 1 | 0·58 | 2 | 1·01 | 3 |
| Monsoon-Kharif .. | 20·35 | 31 | 21·03 | 33 | 15·44 | 40 | 16·66 | 41 | 13·98 | 33 | 18·19 | 42 | 16·67 | 40 | 17·15 | 26 | 16·06 | 28 | 18·21 | 23 | 12·75 | 28 | 23·06 | 29 |
| Monsoon-Rabi .. | 9·91 | 25 | 8·97 | 26 | 8·80 | 24 | 9·61 | 22 | 7·10 | 19 | 9·58 | 27 | 9·75 | 24 | 6·47 | 16 | 7·35 | 16 | 6·15 | 15 | 5·85 | 20 | 6·34 | 18 |
| Late Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 30·26 | 56 | 30·44 | 62 | 24·71 | 67 | 26·27 | 63 | 21·55 | 54 | 29·36 | 72 | 28·12 | 67 | 25·11 | 44 | 23·91 | 46 | 24·91 | 39 | 19·18 | 50 | 30·41 | 50 |
| Average .. | 29·70 | 39 | 29·51 | 57 | 31·29 | 75 | 31·12 | 59 | 31·58 | 69 | 33·42 | 71 | 34·84 | 59 | 35·18 | 40 | 28·78 | 50 | 28·95 | 50 | 34·44 | 43 | 33·56 | 45 |

*General characteristics.*—In the north, high hills of the Sátpudas. The southern and western portions are also hilly but the hills less high, and continuous. It is drained by the Tápti, the Girna and the Purna. Rainfall larger than in the West Khándesh but less certain.

*Remarks.*—Rainfall generally below average. Regular monsoon broke in Mrig in 2nd week of June, with general heavy fall, sufficient to commence kharíf sowing everywhere. The copious fall of Punarvasu and Pushya about the middle of July and subsequent break were very favourable for completion for kharíf sowings and for growth of seedlings. August rain was generally favourable for kharíf crops and for weeding and hoeing. Purva and Uttara rain in September, though light, was sufficient and seasonable for standing crops. Hast rain in October, though slightly injurious in places to bájri and cotton, was specially useful for rabi sowings. Rabi crops promised well in beginning but they suffered seriously in outturn owing to insufficiency of late rains and absence of dews. On the whole, kharíf season was very good,—cotton being an excellent crop, 12 to 18 annas; jowári and bájri fairly average, 10 to 14 annas; oilseeds middling, 8 to 12 annas. Rabi was a poor crop, being estimated at 4 to 6 annas.

## Násik, 1889.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Niphá'd. | | Yeola. | | Na'ndgaon. | | Ma'legaon. | | Sata'na. | | Kalvan. | | Cha'ndor. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | 0·05 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 0·37 | 3 | 1·10 | 1 | 0·79 | 5 | 0·05 | 2 | 0·54 | 7 | 0·38 | 5 | 0·34 | 4 | 0·78 | 2 | 3·47 | 3 | 0·15 | 1 | 1·97 | 3 | ... | .. |
| Monsoon-Kharíf ... | 7·51 | 46 | 77·61 | 65 | 7·02 | 45 | 3·36 | 21 | 9·83 | 29 | 20·64 | 29 | 7·61 | 36 | 8·72 | 16 | 4·68 | 31 | 8·89 | 30 | 7·58 | 39 | 43·64 | 64 |
| Monsoon-Rabi ... | 15·05 | 36 | 40·40 | 44 | 15·26 | 42 | 11·98 | 27 | 14·38 | 32 | 17·05 | 25 | 6·36 | 30 | 8·52 | 25 | 13·73 | 32 | 14·40 | 24 | 12·67 | 41 | 21·71 | 36 |
| Late Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 22·93 | 85 | 119·11 | 110 | 23·12 | 93 | 15·39 | 50 | 24·75 | 68 | 38·57 | 59 | 14·31 | 70 | 18·02 | 43 | 21·88 | 66 | 23·44 | 55 | 22·22 | 83 | 65·35 | 100 |
| Average ... | 33·74 | 84 | 130·08 | 122 | 27·21 | 91 | 22·68 | 47 | 21·88 | 82 | 28·13 | 59 | 25·36 | 47 | 24·11 | 46 | 34·82 | 69 | 29·48 | 74 | 32·43 | 80 | 92·36 | 100 |

*General Characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—Rainfall generally below average except at Yeola and Nándgaon. Monsoon broke in 2nd week of June, generally in light showers, sufficient for sowing rice, nágli, &c., in western Dángi tálukas and for cotton sowing in Nándgaon. General heavy rain came in Punarvasu and Pushya about the middle of July, sufficient for rice and nágli transplantation in west and for kharíf sowings in east. Kharíf area was, however, short owing to insufficient rain, in the central tálukas of Sinnar, Niphád and Kalvan. Ashlesha and Magha rain in August was seasonable and sufficient for standing crops in Dángi tálukas; elsewhere it was very deficient and standing crops began to wither, especially in Niphád where cattle also suffered from scarcity of fodder and drinking water. The needed relief came in Uttara by middle of September; withering crops everywhere revived and fodder prospects much improved. Hast rain in early October was generally seasonable and sufficient for standing kharíf crops and for rabi sowing. Chitra rain was generally light except in Yeola where heavy rain (3·24 inches) was slightly injurious to kharíf crops and rabi seedlings. Owing to absence of moisture from late rains, the rabi yielded a poor outturn. On the whole kharíf season was fair, the outturn being estimated at 10 to 16 annas except in Sinnar and Niphád where the estimates were from 4 to 8 annas. Rabi was estimated at 6 to 12 annas.

## Ahmadnagar, 1889.

| Rain Periods. | 1 Nagar. | | 2 Pa'rner. | | 3 Shrigonda | | 4 Karjat. | | 5 Ja'mkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Ra'huri. | | 9 Kopargaon. | | 10 Sangamner. | | 11 Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains... ... ... | ... | ... | ... | ... | ... | ... | 0·19 | 1 | 0·10 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 0·67 | 5 | 1·67 | 3 | 0·14 | 1 | 0·22 | 2 | 0·84 | 5 | 0·71 | 6 | 0·76 | 7 | 0·85 | 2 | 0·6- | 3 | 1·01 | 4 | 3·55 | 5 |
| Monsoon-Kharíf ... ... | 3·97 | 26 | 3·22 | 17 | 3·35 | 16 | 6·00 | 11 | 17·19 | 30 | 12·83 | 33 | 8·79 | 25 | 8·89 | 18 | 4·37 | 23 | 5·59 | 22 | 5·29 | 26 |
| Monsoon-Rabi ... ... | 18·51 | 33 | 20·03 | 34 | 16·93 | 28 | 16·78 | 25 | 16·90 | 26 | 17·33 | 31 | 17·46 | 28 | 17·09 | 24 | 11·84 | 26 | 17·70 | 27 | 15·16 | 26 |
| Late Rains ... ... ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 23·15 | 64 | 24·92 | 54 | 20·42 | 45 | 23·19 | 39 | 35·03 | 62 | 30·87 | 70 | 27·01 | 60 | 26·83 | 44 | 16·85 | 52 | 24·30 | 53 | 24·00 | 57 |
| Average ... | 25·11 | 61 | 23·16 | 47 | 21·52 | 68 | 25·38 | 31 | 28·95 | 62 | 26·94 | 67 | 25·42 | 69 | 22·86 | 36 | 18·41 | 43 | 20·86 | 75 | 23·00 | 75 |

*General characteristics.*—*(1) Desh*—Godáveri valley (tálukás 6 to 9): rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukás 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukás 1, 2, 5 and 10 lie between these valleys. Alternation of bare hill and treeless plain with occasional fertile well-wooded tracts. Rain more regular. *(2) Dángs*—Half Akola has very heavy rain: Half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Rainfall above average in east and north-west; elsewhere up to average. Ante-monsoon showers were scant. Regular monsoon broke in 2nd week of June, with fairly heavy fall for commencing cotton and *tushár* (catch crops in rabi lands) sowings in east. But the general sowing rain came by the middle of July. It was heavy in south-east where kharíf sowings full; elsewhere only sufficient to allow partial sowings. August rain was very scant, except in Jámkhed in south-east, and crops began to wither for want of moisture, and fodder became scarce. Relief, however, came early in September, the heavy fall of Purva and Uttara being sufficient and seasonable for sowing rabi and to revive the withering kharíf. The heavy fall of Hast and Chitra in October was slightly injurious to ripening bájri and retarted rabi sowing. The sowing, however, was completed under subsequent break, but the crops, especially those grown in lighter soil, suffered in outturn for want of moisture from late rains. Season was fair on the whole. Outturn of tushár crops was fairly good—10 to 14 annas in east; elsewhere very poor—2 to 4 annas. Kharíf crops fairly good in west and north-east where the outturn was 10 to 14 annas, but poor in south, 4 to 6 annas. Rabi crops generally fair and outturn varied from 7 to 12 annas.

## Poona, 1889.

| Rain Periods. | Poona. | | Paud. | | Vadgaon. | | Lona'vli. | | Khed. | | Ghoda. | | Junnar. | | Sirur. | | Sa'svad. | | Supa. | | Ba'ra'mati. | | Inda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·02 | 1 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | .. | ... | 0·38 | 2 | 0·45 | 3 | ... | ... | ... | ... | 0·11 | 3 |
| Ante-Monsoon ... | 5·13 | 6 | 2·31 | 7 | 3·42 | 6 | 0·42 | 2 | 0·57 | 6 | 2·62 | 3 | 2·51 | 3 | 1·27 | 5 | 5·51 | 8 | 1·82 | 7 | 2·08 | 9 | 1·32 | 6 |
| Monsoon-khárif ... | 10·40 | 39 | 35·06 | 65 | 23·88 | 57 | 126·52 | 71 | 6·29 | 48 | 7·71 | 35 | 12·37 | 42 | 4·00 | 20 | 2·89 | 30 | 2·19 | 12 | 3·20 | 12 | 7·02 | 26 |
| Monsoon-Rabi ... | 21·94 | 36 | 28·82 | 41 | 16·39 | 40 | 28·46 | 41 | 15·29 | 38 | 18·95 | 33 | 21·55 | 37 | 17·07 | 27 | 16·31 | 36 | 16·40 | 26 | 19·92 | 32 | 25·21 | 31 |
| Late Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 37·49 | 82 | 66·19 | 113 | 43·69 | 103 | 155·40 | 114 | 22·15 | 92 | 29·28 | 71 | 36·43 | 82 | 22·72 | 54 | 25·16 | 77 | 20·41 | 45 | 25·20 | 53 | 33·66 | 66 |
| Average ... | 31·06 | 90 | 60·16 | 106 | 64·93 | 101 | 158·04 | 124 | 24·66 | 98 | 30·14 | 104 | 28·67 | 93 | 21·73 | 64 | 23·25 | 91 | 20·32 | 40 | 22·72 | 69 | 24·78 | 71 |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukás are uncertain and irregular like the adjoining tálukás of Sholápur.

*Remarks.*—Rainfall generally up to average but above average at Junnar and Indápur. Ante-monsoon showers in Rohini were useful for commencing rice and nágli sowing in Mával and for preparing land in the Desh. Regular monsoon broke with Mrig. The fall in June, though moderate, was sufficient and seasonable for kharíf sowings in Mával; in the Desh sowings retarded. July rain, though generally light, was sufficient for rice and nágli transplantation in Mával, but in the Desh it was very scant and sowings partial except at Indápur, where exceptionally heavy rain (5 inches) fell in Punarvasu. August rain was seasonable and sufficient in Mával, but most deficient in the Desh, where kharíf crops began to wither where sown and cattle suffered from scarcity of fodder and drinking water. In south-east relief came earlier with Purva rain and general heavy rain fell all over in Uttara about the middle of September. The withering kharíf crops much benefited, fodder prospects improved and rabi sowing begun. The heavy Hast rain in October was beneficial to rabi on the whole, though slightly harmful to reaped as well as standing bájri in places. The continuous heavy fall of Chitra was therefore quite unnecessary, damaging bájri and delaying rabi sowing. The rabi, however, suffered in outturn for want of moisture from the late rains. Season was fair on the whole. Kharíf outturn was estimated at 12 to 16 annas in west and in east at 8 to 12 annas in parts of Purandhar and Indápur and at 4 to 8 annas elsewhere. Rabi outturn of jowári, wheat and gram was 8 to 12 annas and kardai 14 annas.

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## Sholápur, 1889.

| Rain Periods. | Sholápur. | | Ba'rsi. | | Ma'dha. | | Karma'la. | | Pandharpur. | | Sa'ngola. | | Ma'lsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·11 | 1 | 0·08 | 1 | 0·17 | 1 | 0·04 | 1 | 0·02 | 1 | ... | ... | ... | ... |
| Ante-Monsoon. | 1·45 | 7 | 0·92 | 13 | 2·64 | 4 | 1·27 | 6 | 1·49 | 9 | 2·14 | 5 | 1·91 | 4 |
| Monsoon-kharíf | 11·84 | 35 | 13·33 | 42 | 12·37 | 26 | 8·92 | 27 | 9·85 | 30 | 3·99 | 11 | 8·05 | 9 |
| Monsoon-Rabi . | 19·82 | 22 | 17·57 | 36 | 23·50 | 29 | 25·89 | 34 | 17·59 | 28 | 16·95 | 22 | 24·28 | 21 |
| Late Rains ... | ... | ... | 0·04 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 33·22 | 65 | 31·94 | 93 | 38·68 | 60 | 36·12 | 68 | 28·95 | 68 | 23·08 | 38 | 34·24 | 34 |
| Average ... | 33·33 | 64 | 32·35 | 84 | 27·89 | 72 | 26·32 | 87 | 27·65 | 62 | 22·99 | 45 | 21·07 | 49 |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Rainfall much above average in Mádha, Karmála and Málsiras; elsewhere up to average. Preparatory showers fell fairly well. Monsoon broke in 2nd week of June but the fall was not sufficient for kharíf sowing. Heavy sowing rain came about the middle of July all over the district and kharíf sown to usual extent except in west. August rain (Ashlesha and Magha) was everywhere scanty and young crops began to wither in places. Relief came with general heavy fall of Purva in early September. Uttara and Hast rains, though slightly excessive in places, were generally favourable for standing crops and sufficient for rabi sowing. But abnormally heavy fall of Chitra in middle of October was very injurious, damaging reaped and ripening kharíf and delaying rabi sowing. No rain fell in November and December, and the rabi, especially jowári, suffered in outturn for want of sufficient moisture. Though the annual rainfall was above or up to average, the season was only fair owing to unseasonableness of the fall. The kharíf outturn variously estimated at 6 to 12 annas, and specially poor in Karmála and Sángola (4 to 6 annas). Rabi outturn estimated at 8 to 12 annas.

## Sa'ta'ra, 1889.

| Rain Periods. | Sa'ta'ra. | | Koregaon. | | Wái. | | Khanda'la. | | Medha. | | Ma'lcolmpeth. | | Pa'tan. | | Kara'd. | | Peth. | | Shira'la. | | Dahivadi. | | Vadu'j. | | Vita. | | Ta'sgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | In. |
| Early Rains ... ... | 0·62 | 5 | ... | ... | ... | ... | ... | ... | 0·12 | 1 | 0·08 | 1 | 0·37 | 2 | 0·55 | 2 | ... | ... | 0·90 | 1 | 0·24 | 1 | 0·35 | 1 | ... | ... | ... | ... |
| Ante-Monsoon ... | 6·19 | 13 | 3·98 | 9 | 3·39 | 12 | 3·27 | 7 | 3·05 | 8 | 2·18 | 9 | 2·19 | 9 | 4·32 | 13 | 4·49 | 12 | 5·29 | 10 | 3·97 | 9 | 1·78 | 10 | 3·17 | 7 | 2·93 | 14 |
| Monsoon-Kharíf ... | 17·05 | 51 | 6·73 | 18 | 10·82 | 49 | 3·94 | 15 | 29·03 | 57 | 185·81 | 70 | 36·35 | 57 | 8·98 | 44 | 7·07 | 40 | 15·54 | 45 | 2·57 | 20 | 2·51 | 14 | 3·98 | 16 | 3·87 | 28 |
| Monsoon-Rabi ... | 22·35 | 45 | 21·38 | 36 | 17·26 | 46 | 18·21 | 30 | 23·12 | 40 | 67·83 | 60 | 24·47 | 37 | 28·13 | 48 | 19·08 | 35 | 21·29 | 39 | 23·84 | 31 | 23·17 | 29 | 29·55 | 32 | 18·07 | 41 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·08 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·02 | 1 |
| ... | 46·21 | 114 | 32·09 | 63 | 31·47 | 107 | 25·42 | 52 | 55·32 | 106 | 255·98 | 141 | 63·38 | 105 | 41·98 | 107 | 30·64 | 87 | 43·02 | 95 | 30·62 | 61 | 27·81 | 54 | 36·70 | 55 | 24·89 | 84 |
| Average ... | 40·84 | 123 | 27·68 | 81 | 32·47 | 113 | 21·45 | 43 | 70·49 | 118 | 268·08 | 146 | 67·85 | 108 | 31·64 | 122 | 29·43 | 101 | 37·88 | 80 | 20·51 | 71 | 21·85 | 71 | 24·71 | 67 | 28·49 | 96 |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich well-wooded plains.

*Remarks.*—Rainfall generally above average, but slightly below average in Medha and Pátan in west and Tásgaon in south-east. Ante-monsoon showers were unusually favourable for preparing land. Monsoon set in with Mrig in 2nd week of June and the rainfall was sufficient and seasonable for rice, nágli and other kharíf sowings in west. But in the south-eastern tálukas kharíf sowings delayed, until heavy rain came in Pushya (18th—31st July). Kharíf area was not full in east. Ashlesha and Magha rain in August, though sufficient to keep up standing crops in good condition in west, was very deficient in east where sown crops began to wither and much anxiety felt. Here relief came at end of Purva in early September. General heavy rain fell in Uttara which was highly beneficial for rabi sowing and revived withering kharíf. Hast rain in early October was also throughout beneficial. But abnormally heavy rain in Chitra in the middle of October was very injurious, damaging reaped as well as ripened bájri and submerging rabi seedlings in places. Rabi sowings completed in early November and crops promised well at first, but owing to the total absence of late rains combined with severe cold, the rabi considerably suffered in outturn. Season was fair on the whole. Kharíf outturn estimated at 11 to 14 annas. Rabi outturn was only moderate—8 to 10 annas.

## Belgaum, 1889.

| Rain Periods. | Belgaum. | | Chandgad. | | Kha'na'pur. | | Sampgaon. | | Saundatti. | | Murgod. | | Goka'k. | | Chikodi. | | Hukeri. | | A'thni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·15 | 1 | ... | ... | ... | ... | ... | ... | 0·08 | 2 | ... | ... | ... | ... | 0·71 | 3 | ... | ... | 0·05 | 1 |
| Ante-Monsoon ... ... | 7·25 | 21 | 8·21 | 10 | 7·70 | 17 | 7·21 | 15 | 1·34 | 13 | 2·39 | 7 | 6·38 | 15 | 4·12 | 13 | 6·81 | 15 | 7·27 | 15 |
| Monsoon-Kharíf ... ... | 23·31 | 66 | 64·63 | 71 | 34·94 | 69 | 9·31 | 44 | 4·01 | 26 | 4·98 | 16 | 3·84 | 28 | 6·34 | 38 | 6·41 | 27 | 3·06 | 31 |
| Monsoon-Rabi ... ... | 24·49 | 51 | 24·11 | 42 | 18·34 | 48 | 18·62 | 40 | 19·82 | 34 | 19·42 | 30 | 19·32 | 37 | 18·79 | 39 | 17·66 | 29 | 15·51 | 39 |
| Late Rains ... ... | 0·20 | 1 | 0·34 | 1 | 0·45 | 2 | 0·19 | 1 | 0·51 | 1 | 0·70 | 2 | 0·66 | 2 | 0·35 | 2 | 0·15 | 1 | ... | ... |
| Total ... | 55·40 | 140 | 97·29 | 124 | 61·43 | 136 | 35·33 | 100 | 25·76 | 76 | 27·49 | 55 | 30·20 | 82 | 30·31 | 95 | 31·03 | 72 | 25·89 | 86 |
| Average ... | 46·80 | 134 | 95·98 | 108 | 64·68 | 120 | 28·14 | 89 | 24·47 | 94 | 24·40 | 71 | 23·79 | 93 | 27·65 | 84 | 21·60 | 68 | 24·42 | 75 |

*General characteristics*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—Rainfall up to or above the average. Ante-monsoon showers very favourable for preparing land and for commencing early sowings of rice, nágli, &c., in south-west. Regular monsoon set in with Mrig in 2nd week of June and the fall was seasonable and sufficient in south-west for sowing and transplanting rice, nágli, &c. Elsewhere kharíf rain was deficient and sowings not full. August rain was generally scanty, especially in Saundatti and Gokák and kharíf crops began to wither in places. Timely relief came in September in Purva and Uttara. The withering crops revived and cotton sowing seasonably done. The Hast rains in early October were favourable for gram and wheat sowing, but the abnormally heavy rain in Chitra in middle of October was injurious to standing kharíf as also to rabi seedlings. Rabi sowing completed in early November, but the crops suffered in outturn from insufficiency of moisture from late rains. Season on the whole fairly good. Kharíf outturn generally estimated at 10 to 16 annas, but in the north it was poor, from 4 to 6 annas. Rabi crops, especially wheat, gram and cotton, were good in Chikodi, Gokák, Parasgad and Sampgaon, the outturn being estimated at 12 to 16 annas, elsewhere rabi outturn was 8 to 10 annas.

## Bijápur, 1889.

| Rain Periods. | Bija'pur. | | Indi. | | Sindgi. | | Ba'geva'di. | | Muddebiha'l. | | Ba'galkot | | Bilgi. | | Ba'da'mi. | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. .. | 0·02 | 2 | 0·19 | 1 | 0·39 | 2 | 0·05 | 1 | .. | .. | .. | .. | 0·30 | 1 | .. | .. | 0·05 | |
| Ante-Monsoon .. .. .. .. | 5·16 | 16 | 2·69 | 9 | 1·78 | 7 | 3·07 | 7 | 2·76 | 9 | 2·40 | 10 | 3·10 | 4 | 1·44 | 5 | 3·82 | 7 |
| Monsoon-Kharíf.. .. .. .. | 7·11 | 26 | 9·14 | 25 | 10·21 | 38 | 10·45 | 21 | 10·36 | 29 | 4·05 | 36 | 5·40 | 13 | 8·36 | 25 | 7·03 | 26 |
| Monsoon Rabi .. .. .. .. | 23·70 | 45 | 19·43 | 30 | 13·44 | 34 | 16·98 | 33 | 29·62 | 32 | 17·00 | 34 | 17·90 | 34 | 23·50 | 28 | 18·35 | 33 |
| Late Rains .. .. .. .. | 0·05 | 1 | 0·10 | 1 | 0·11 | 1 | 0·08 | 1 | 0·23 | 2 | 0·43 | 2 | 0·48 | 2 | .. | .. | 0·23 | 2 |
| Total .. | 36·04 | 90 | 31·55 | 66 | 25·93 | 82 | 30·63 | 63 | 42·97 | 72 | 23·88 | 82 | 27·18 | 54 | 33·30 | 58 | 29·48 | 69 |
| Average .. | 26·79 | 102 | 25·73 | 65 | 25·71 | 63 | 25·02 | 75 | 23·46 | 60 | 24·07 | 77 | 22·93 | 48 | 25·51 | 40 | 25·82 | 72 |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukas of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Rainfall generally much above average. Ante-monsoon showers throughout favourable for preparing land. Monsoon broke about 9th June with general heavy fall, sufficient to commence kharíf sowing in most places. July rain was favourable for pushing kharíf sowing though not enough for its completion in some tálukas. Ashlesha and Magha rain in August was very deficient and young kharíf crops began to wither and cotton sowing retarded. Relief, however, came with Purva in early September. The Uttara and Hast rain was most seasonable and sufficient for cotton and other rabi sowing. But the abnormally heavy rain of Chitra in middle of October (as much as 15 inches in Muddebihál), was highly injurious, damaging standing bájri and retarding rabi sowing. In Hungund standing crops on the Malaprabha banks were washed away by heavy floods. The subsequent break was favourable for completing rabi sowing. But owing to insufficient moisture from late rains rabi crops suffered in outturn. On the whole season fair and better than that of last year. Kharíf outturn was better in north-west where estimated at 10 to 14 annas; elsewhere about 9 annas. Rabi outturn estimated at 8 to 12 annas.

## Dhárwár, 1889.

| Rain Periods. | Dha'rwa'r. | | Mugu'd. | | Hubli. | | Kalghatgi. | | Banka'pur. | | Ha'ngal. | | Kod. | | Ra'nebennur. | | Karajgi. | | Gadag. | | Mundargi | | Navalgund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·02 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 3·87 | 14 | 5·42 | 14 | 5·17 | 13 | 4·12 | 12 | 2·20 | 7 | 3·36 | 10 | 5·02 | 11 | 4·93 | 6 | 3·40 | 8 | 2·36 | 8 | 2·85 | 4 | 2·97 | 9 | 6·28 | 8 | 2·55 | 8 |
| Monsoon-Kharíf | 8·40 | 40 | 12·60 | 31 | 6·59 | 35 | 18·17 | 54 | 7·28 | 33 | 18·75 | 45 | 10·24 | 43 | 6·66 | 25 | 4·61 | 33 | 7·77 | 30 | 4·88 | 13 | 3·00 | 15 | 2·70 | 10 | 7·62 | 26 |
| Monsoon-Rabi .. | 25·73 | 44 | 16·40 | 30 | 16·14 | 42 | 15·64 | 35 | 10·00 | 26 | 16·60 | 37 | 11·59 | 30 | 16·67 | 25 | 15·91 | 32 | 19·70 | 32 | 17·17 | 23 | 20·93 | 25 | 17·58 | 26 | 25·32 | 29 |
| Late Rains .. | 0·62 | 3 | 0·40 | 2 | 0·50 | 1 | 0·87 | 2 | 0·51 | 1 | 0·22 | 1 | 0·80 | 2 | 0·50 | 2 | 0·03 | 1 | 0·96 | 2 | 1·00 | 1 | .. | .. | 0·30 | 1 | 0·16 | 1 |
| Total . | 38·64 | 102 | 34·82 | 77 | 28·40 | 91 | 38·80 | 103 | 19·99 | 67 | 38·93 | 93 | 27·65 | 86 | 28·76 | 58 | 23·95 | 74 | 30·79 | 72 | 25·90 | 41 | 26·90 | 49 | 26·86 | 45 | 35·65 | 64 |
| Average .. | 32·95 | 115 | 34·34 | 114 | 27·03 | 83 | 30·14 | 108 | 28·29 | 77 | 37·34 | 96 | 27·70 | 81 | 23·82 | 67 | 27·21 | 70 | 25·98 | 70 | 17·51 | 43 | 25·36 | 54 | 23·56 | 48 | 25·77 | 67 |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton, but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur Tálukas are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: 'Good rain won't give a big crop, nor will bad rain bring famine.' This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Rainfall generally up to or above average except at Bankápur. Ante-monsoon showers were abundant and beneficial to early sowings of rice, sáva, &c., in the malád. Monsoon commenced early in June with fairly heavy rain in western tálukas where kharíf sowings of rice, jowari, tili and rále were seasonably done; but in north and east sowing rain both in June and July was generally deficient and kharíf area not full. August rain was very deficient throughout the district. Rice in the malád and other kharíf crops elsewhere badly suffered for want of moisture, and scarcity of fodder and drinking water felt in most places. Early relief came in Purva in parts, but general relief came with the heavy fall in Uttara (middle of September). Withering kharíf revived and cotton sowing commenced. Hast rain, though rather heavy in places, was on the whole seasonable and sufficient for rabi sowing. But the Chitra rain about the middle of October was injuriously heavy in places. The rabi suffered in outturn as elsewhere from insufficient moisture from late rains. Season was on the whole fair. Kharíf outturn was estimated at an average of 9 annas. Of rabi crops cotton was mostly affected with blight, and jowári stunted in its growth and the average outturn estimated at 7 and 9 annas respectively. Wheat and gram were better and the outturn estimated at 10 annas.

## Kánara, 1889.

| Rain Periods. | Kárwa'r. | | Ankola. | | Kumta. | | Honávar. | | Bhatkal. | | Haliya'l. | | Supa. | | Yella'pur. | | Mundgod. | | Sirsi. | | Sidda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·04 | 1 | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. | 19·14 | 8 | 17·31 | 7 | 17·14 | 5 | 16·25 | 9 | 15·49 | 9 | 8·20 | 16 | 10·07 | 14 | 9·52 | 13 | 3·86 | 14 | 7·36 | 17 | 6·75 | 10 |
| Monsoon-Kharíf .. | 108·52 | 71 | 103·26 | 71 | 119·57 | 69 | 111·61 | 70 | 125·00 | 71 | 23·47 | 63 | 62·57 | 66 | 54·65 | 70 | 19·35 | 67 | 62·94 | 70 | 74·73 | 71 |
| Monsoon-Rabi .. | 52·23 | 43 | 44·29 | 40 | 61·91 | 46 | 49·27 | 44 | 43·24 | 50 | 22·97 | 52 | 24·25 | 49 | 26·82 | 51 | 15·90 | 39 | 36·65 | 49 | 36·85 | 53 |
| Late Rains .. .. | 0·04 | 1 | .. | .. | 0·33 | 1 | 0·42 | 1 | 0·25 | 3 | 0·34 | 2 | 0·35 | 2 | 0·34 | 1 | 0·30 | 2 | 0·41 | 2 | 0·56 | 2 |
| Total .. | 179·93 | 123 | 164·86 | 118 | 199·12 | 122 | 177·57 | 125 | 184·10 | 134 | 54·98 | 133 | 97·28 | 132 | 91·33 | 135 | 39·41 | 122 | 107·36 | 138 | 118·99 | 137 |
| Average .. | 116·62 | 121 | 121·46 | 98 | 133·11 | 118 | 128·38 | 119 | 140·91 | 130 | 44·37 | 126 | 89·18 | 129 | 91·56 | 135 | 41·25 | 119 | 91·94 | 130 | 98·93 | 125 |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The lowland or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—Rainfall much above average except in Yellápur and Mundgod. South-west monsoon set in on 2nd June with heavy rain, excessively heavy on coast where rice seed either rotted or, having been washed over, had to be resown in places. In July and August rain fell almost daily and was on the whole seasonable and sufficient for transplantation and weeding, though in some places above Ghát (Haliyál and Mundgod) the rain was slightly deficient for transplantation. There was a short but general break in Purva, but heavy rain fell again in Uttara and Hast, generally favourable, though injuriously excessive to crops in lowlying lands on coast. But the continuous heavy fall in Chitra about the middle of October was unnecessarily heavy and injurious to reaped as well as standing crops, especially on coast where there was already an excess of moisture. On the whole rice gave a fair outturn throughout the district, being estimated at from 10 to 16 annas and in the above Ghát tálukas the yield of betelnut and other garden produce was also favourable.

## Ratnágiri, 1889.

| Rain Periods. | Ratna'giri. | | Vengurla. | | Málvan. | | Devgad. | | Ra'ja'pur. | | Sangameshvar. | | Chiplun. | | Guha'gar. | | Khed. | | Da'poli. | | Mandangad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | Ins. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | 0·01 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·01 | 1 | 0·03 | 1 | .. | .. | .. | .. |
| Ante-Monsoon .. .. | 5·73 | 7 | 11·72 | 4 | 10·93 | 5 | 7·72 | 6 | 5·50 | 6 | 6·23 | 7 | 1·91 | 4 | 1·93 | 4 | 1·08 | 4 | 1·04 | 3 | 0·20 | 1 |
| Monsoon-Kharíf .. | 81·77 | 68 | 89·24 | 70 | 78·24 | 68 | 71·15 | 69 | 110·10 | 71 | 115·35 | 70 | 117·74 | 70 | 100·01 | 67 | 112·79 | 70 | 110·57 | 69 | 120·97 | 69 |
| Monsoon-Rabi .. .. | 19·46 | 40 | 30·53 | 46 | 28·42 | 39 | 24·54 | 36 | 37·74 | 43 | 32·41 | 54 | 36·25 | 47 | 17·30 | 38 | 37·05 | 41 | 22·82 | 37 | 29·62 | 48 |
| Late Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 106·97 | 116 | 131·49 | 120 | 117·59 | 112 | 103·41 | 111 | 153·34 | 120 | 153·99 | 131 | 155·90 | 121 | 119·25 | 110 | 150·95 | 116 | 134·43 | 109 | 150·79 | 118 |
| Average .. | 100·73 | 103 | 141·48 | 113 | 89·57 | 102 | 87·50 | 96 | 127·91 | 108 | 145·57 | 128 | 146·04 | 114 | 100·84 | 94 | 130·52 | 110 | 132·64 | 110 | 150·79 | 113 |

*General characteristics.*—The district is formed by a narrow belt of lowland; though hilly and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Rainfall generally above or up to average. Regular monsoon broke on 2nd June and rain fell continuously for nearly three months, being throughout seasonable and sufficient for ploughing and for transplantation of rice and nágli. The short break in Purva was generally favourable for weeding. Uttara and Hast rain in September, though beneficial to *mahán* or late crops, was slightly injurious to ripening *halve* or early crops. Chitra rain in the middle of October, though not so excessive as in Kánara, was injuriously heavy to early crops which were being reaped in all places. Rice was laid and reaping delayed for a time. Late rice slightly suffered for want of sufficient rain at earing time. Season fairly good on the whole. Outturn of early crops was estimated at 10 to 13 annas and that of late crops at 10 to 12 annas. Harik outturn estimated at 11 annas.

## Kolába, 1889.

| Rain Periods. | Aliba'g. | | Panvel. | | Uran. | | Pen. | | Roha. | | Ma'ngaon. | | Maha'd. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... |
| Ante-Monsoon... ... ... | 0·16 | 4 | 0·10 | 3 | 0·15 | 2 | 0·36 | 3 | 0·03 | 1 | 0·38 | 2 | 0·84 | 3 |
| Monsoon-Khari'f ... ... | 71·43 | 67 | 85·01 | 67 | 62·57 | 63 | 70·68 | 64 | 96·34 | 64 | 104·28 | 68 | 88·96 | 66 |
| Monsoon-Rabi... ... ... | 14·42 | 40 | 20·43 | 42 | 17·14 | 36 | 32·06 | 39 | 30·67 | 37 | 30·92 | 45 | 37·13 | 49 |
| Late Rains ... ... ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 86·01 | 111 | 105·54 | 112 | 79·86 | 101 | 103·10 | 106 | 127·04 | 102 | 135·58 | 115 | 126·93 | 118 |
| Average ... | 84·79 | 99 | 110·50 | 114 | 95·48 | 78 | 114·04 | 107 | 122·27 | 87 | 127·59 | 126 | 130·58 | 115 |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heavier in parts towards the Sahyádris.

*Remarks.*—Rainfall generally up to average except in Uran petha. Monsoon set in with Mrig about 5th June and rain fell heavily except in north, generally sufficient for kharíf sowing. Copious rain came with A'rdra (20th June) and continued till the end of Magha (27th August), most seasonable and sufficient for ploughing, transplantation and weeding througout the district. There was a short break with occasional light showers in Purva. Uttara and Hast rain in latter part of September and in early October was very beneficial to standing crops. Chitra rain in the middle of October, though unnecessary, was not injuriously heavy as in Ratnágiri and Kánara. On the whole season was good. Outturn of rice and varkas crops such as nágli, vari, &c., was estimated at 14 annas. Rabi outturn was estimated at 12 to 14 annas.

## Thána, 1889.

| Rain Periods. | Tha'na. | | Kalya'n. | | Karjat. | | Ma'thera'n. | | Kha'la'pur. | | Murba'd. | | Sha'ha'pur. | | Mokha'da. | | Bhiwndi. | | Bassein. | | Va'da. | | Ma'him. | | Da'ha'nu. | | Umbargaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| arly Rains.. .. | .. | .. | .. | .. | 0·04 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| nte-Monsoon .. | 0·03 | 1 | 0·01 | 1 | .. | .. | 0·51 | 2 | 0·38 | 2 | .. | .. | 0·12 | 2 | 0·81 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 0·17 | 1 | 0·44 | 1 |
| onsoon-Khari'f .. | 81·96 | 70 | 78·19 | 67 | 90·31 | 68 | 167·42 | 69 | 82·92 | 67 | 72·61 | 60 | 69·85 | 68 | 58·29 | 60 | 83·89 | 63 | 70·17 | 63 | 64·08 | 55 | 61·11 | 59 | 57·39 | 55 | 48·65 | 38 |
| onsoon-Rabi .. | 14·74 | 39 | 19·24 | 40 | 35·13 | 40 | 62·36 | 46 | 35·13 | 44 | 36·84 | 36 | 26·23 | 37 | 37·66 | 40 | 14·76 | 33 | 9·04 | 31 | 17·41 | 34 | 12·74 | 31 | 10·21 | 28 | 4·61 | 21 |
| ate Rains .. .. | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 96·73 | 110 | 97·44 | 108 | 125·48 | 109 | 230·29 | 117 | 118·43 | 113 | 109·45 | 97 | 96·20 | 107 | 96·76 | 103 | 98·65 | 96 | 79·21 | 94 | 81·49 | 89 | 73·85 | 90 | 67·77 | 84 | 53·70 | 60 |
| Average .. | 99·12 | 105 | 100·73 | 101 | 126·91 | 106 | 209·71 | 124 | 122·09 | 102 | 96·15 | 85 | 111·34 | 98 | 100·92 | 101 | 101·79 | 102 | 78·85 | 92 | 95·96 | 93 | 62·67 | 89 | 71·39 | 82 | 64·83 | 63 |

*General characteristics.*—Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Rainfall slightly below or up to average. Monsoon broke generally on 5th June in Mrig, and a week later in north; and rain fell in light showers, generally sufficient for kharif sowing. Heavy rain came in A'rdra at end of June and transplantation commenced in places. Rain fell almost daily in July and August and was on the whole seasonable and sufficient for ploughing, transplantation and weeding. Purva rain in early September was very light, especially in north, where crops slightly suffered, but Uttara and Hast rain was throughout beneficial to late crops, though slightly excessive and injurious to early crops in south-east. Very little damage was caused by Chitra rain, as the fall was moderate. On the whole season was favourable. Outturn of kharif crops was estimated at 12 to 14 annas and that of rabi crops at 10 to 12 annas.

## Surat, 1889.

| Rain Periods. | Surat. | | Olpád. | | Ra'nder. | | Ma'ndvi. | | Bárdoli. | | Válod. | | Jala'lpur. | | Chikhli. | | Bulsár. | | Pa'rdi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·12 | 1 | ... | ... | 0·07 | 1 | 0·12 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 0·28 | 2 | 0·76 | 2 | 0·11 | 1 | ... | ... | 0·18 | 1 | 0·25 | 2 | 0·30 | 2 | 0·11 | 1 | 0·47 | 2 | 0·15 | 1 |
| Monsoon-Kharíf ... ... | 30·29 | 47 | 28·62 | 28 | 26·99 | 46 | 27·59 | 49 | 29·49 | 50 | 31·90 | 49 | 36·56 | 48 | 44·14 | 46 | 40·34 | 51 | 58·65 | 57 |
| Monsoon-Rabi ... ... | 9·53 | 27 | 5·45 | 17 | 7·81 | 24 | 7·30 | 24 | 6·10 | 34 | 4·70 | 22 | 8·88 | 21 | 8·26 | 21 | 9·32 | 28 | 10·29 | 33 |
| Late Rains ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 40·22 | 77 | 34·83 | 47 | 34·98 | 72 | 35·01 | 74 | 35·77 | 85 | 36·85 | 73 | 45·74 | 71 | 52·51 | 68 | 50·13 | 81 | 69·09 | 91 |
| Average ... | 44·06 | 61 | 35·52 | 56 | 42·95 | 52 | 65·27 | 61 | 53·82 | 68 | 61·31 | 68 | 58·96 | 69 | 77·63 | 68 | 74·43 | 64 | 71·49 | 72 |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east dángs with heavy rainfall but light soil. As a rule rain lighter on the coast than inland.

*Remarks.*—Rainfall up to average in Chorási, Olpád and Párdi talukas; elsewhere much below average. Monsoon broke in 2nd week of June with fair showers, and partial sowings of rice and other kharíf crops commenced. Árdra rain was sufficient for completing early sowings in south, but in north rain was scanty and sowings retarded. General heavy rain came in Punarvasu and Pushya in July and was throughout seasonable and sufficient for rice transplantation and for completing sowings of juár, bájri and cotton. August rain, though sufficient for cotton and juár, was insufficient for rice. Uttara and Hast rain in September, though not heavy, was sufficient and seasonable to crops except rice which slightly suffered in outturn. The Chitra rain in October did some damage to reaped rice and cut grass in Párdi. Season fairly good on the whole. Kharíf outturn of juár and bájri was estimated at 13 annas, rice 12 annas and cotton 10 annas. Rabi outturn of wheat and gram was estimated at 9 annas.

## Broach, 1889.

| Rain Periods. | Broach. | | Ankleshwar. | | Ha'nsot. | | Va'gra. | | A'mod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·15 | 1 | 0·05 | 1 | ... | ... | 0·01 | 1 | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 0·82 | 4 | 0·88 | 3 | 0·57 | 3 | 0·38 | 2 | 0·60 | 3 | 0·55 | 2 |
| Monsoon-Kharíf ... ... | 25·15 | 38 | 23·96 | 37 | 26·50 | 23 | 19·77 | 30 | 20·71 | 30 | 20·79 | 36 |
| Monsoon-Rabi ... ... | 7·61 | 14 | 5·90 | 17 | 7·62 | 13 | 6·58 | 20 | 8·73 | 24 | 6·67 | 19 |
| Late Rains ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 33·73 | 57 | 30·79 | 58 | 34·69 | 39 | 26·74 | 53 | 30·04 | 57 | 28·01 | 57 |
| Average ... | 44·21 | 47 | 41·41 | 38 | 34·24 | 28 | 30·61 | 39 | 41·75 | 32 | 39·46 | 38 |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being as a rule more plentiful in the Broach Táluka. The rainfall is supplemented by heavy dews from October to December.

*Remarks.*—Rainfall generally below average except in Hánsot. There were light showers at end of May, but the Mrig rain in early June was very scanty, except at Hánsot and sowings generally retarded till end of June when fair rain of A'rdra fell all over and was sufficient to begin kharíf sowings. Copious rain fell in July in Punarvasu and Pushya and was throughout seasonable and sufficient for kharíf sowings. The heavy Áshlesha rain in 1st half of August was generally favourable to standing crops, though slightly injurious to young bájri and cotton which had to be resown in places. A short but general break followed which was very favourable for weeding, resowing and for healthy growth of crops. Again at end of August fair rain of Magha fell all over the district. Purva and Uttara rain in September was rather deficient for rice, especially in Jambusar in north. But Hast rain was everywhere good for standing kharíf crops as also for rabi cultivation. At end of October and in early November large flights of locusts passed through the district, but no appreciable damage was done to the crops. Season very good on the whole, and cotton, the staple of the district, yielded a bumper crop. The Collector remarks:—"The cotton and wheat crops were especially successful this season and have contributed greatly to relieve the cultivators from the embarrassed condition brought about by previous bad seasons. The cotton crops were such as had not been seen for very many years past."

## Kaira, 1889.

| Rain Periods. | Kaira. | | Mehmadabad. | | Mátar. | | Nadia'd. | | Kapadvanj. | | Thásra. | | Anand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early rains .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | 0·04 | 1 | .. | .. |
| Ante-Monsoon .. .. .. | 3·08 | 3 | 2·98 | 3 | 1·80 | 3 | 2·31 | 3 | 2·68 | 3 | 2·74 | 5 | 2·85 | 4 | 1·51 | 3 |
| Monsoon-Kharif .. .. .. | 31·09 | 46 | 22·15 | 38 | 29·33 | 42 | 23·44 | 42 | 21·97 | 34 | 21·94 | 35 | 22·15 | 41 | 22·46 | 36 |
| Monsoon-Rabi .. .. .. | 7·05 | 17 | 8·55 | 15 | 8·96 | 12 | 12·04 | 19 | 8·97 | 20 | 5·13 | 19 | 5·80 | 24 | 9·47 | 21 |
| Late Rains .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 41·22 | 66 | 33·68 | 56 | 40·09 | 57 | 37·79 | 64 | 33·62 | 57 | 29·81 | 59 | 30·84 | 70 | 33·44 | 60 |
| Average .. | 37·13 | 44 | 34·24 | 33 | 37·93 | 30 | 37·27 | 52 | 34·57 | 50 | 36·66 | 42 | 38·44 | 40 | 37·89 | 45 |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land; the centre, a tract of most fertile soil yielding the choicest crops; and westward a bare though well cultivated tract of rice land.

*Remarks.*—Rainfall generally up to average except in south-eastern tálukas along the banks of the Máhi where it was below the average. The preparatory showers of Rohini at end of May were throughout favourable. Monsoon broke in 2nd week of June and sowings of rice, kodra, bávto, &c., begun in most places but general sowing rain came in A'rdra at end of June. July rain was everywhere favourable for kharíf sowing and rice transplantation. Caterpillars which were doing damage in many parts were destroyed by the heavy fall of Pushya and rice had to be resown in places where seedlings were eaten up. The Ashlesha rain in 1st half of August was very beneficial for transplantation of late sown rice. Heavy rain of Magha at end of August, though slightly excessive and injurious to bájri and tobacco in places, was beneficial to rice. Very little rain fell in September, and all crops, and especially the better varieties of rice, suffered in outturn. Hast rain in early October was also light and though it damaged reaped bájri and rice in places, was very beneficial to late rice and bávto and to rabi crops in general. Thus the season which at first promised well, turned out only fair owing to deficiency of late rains. The outturn was estimated as under: Bájri, rice, tur, tobacco and sugarcane at 12 annas; kodra and cotton at 11 annas; bávto, juár, barley and pulses at 10 annas and wheat at 9 annas.

## Panch Maháls, 1889.

| Rain Periods. | Godhra. | | Kálol. | | Hálol. | | Dohad. | | Jhálod. | | Jambughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·06 | 1 | 0·10 | 1 | 0·07 | 1 | 0·07 | 1 | 0·18 | 1 | 0·06 | 1 |
| Ante-Monsoon ... | 3·19 | 4 | 3·17 | 5 | 1·38 | 6 | 2·37 | 4 | 2·67 | 3 | 2·76 | 4 |
| Monsoon-Kharíf . | 22·89 | 44 | 20·89 | 39 | 24·42 | 42 | 19·51 | 34 | 13·84 | 33 | 37·30 | 47 |
| Monsoon-Rabi ... | 9·88 | 21 | 11·50 | 20 | 12·12 | 20 | 10·69 | 16 | 10·43 | 20 | 9·57 | 23 |
| Late-Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. |
| Total ... | 36·02 | 70 | 35·66 | 65 | 37·99 | 69 | 32·64 | 55 | 27·12 | 57 | 49·69 | 75 |
| Average ... | 43·24 | 54 | 40·20 | 50 | 47·97 | 51 | 32·56 | 43 | 32·65 | 26 | 50·69 | 64 |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Rainfall slightly below or up to average. Ante-monsoon showers were unusually good. Regular monsoon broke in 2nd week of June with fair showers sufficient to commence ealry sowings of rice, maize, &c. General sowing rain came in A'rdra at end of June. In July and August rain fell at seasonable intervals and was on the whole sufficient and favourable for full kharíf sowing and rice transplantation. But the fall of Purva and Uttara in September was very deficient, especially for rice. Relief came with Hast in early October. This Hast rain, though it damaged reaped kharíf, was very beneficial to late kharíf crops and made the rabi safe. There were no late rains and kharíf crops were successfully harvested. Season was on the whole good, much better than that of previous year. Outturn of maize—the staple of the district, was estimated at 17 annas, rice 15 annas and other kharíf crops from 12 to 16 annas. Rabi outturn was estimated at 10 to 16 annas.

## Ahmadabad, 1889.

| Rain Periods. | Ahmadabad. | | Para'nti'j. | | Modása. | | Sa'nand. | | Viramga'm. | | Dholka. | | Dhandhuka. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | 0·06 | 1 | 0·07 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 1·30 | 3 | 1·14 | 3 | 1·65 | 6 | 2·06 | 5 | 3·53 | 2 | 2·61 | 3 | 1·65 | 3 | 0·95 | 4 |
| Monsoon-Kharíf .. | 18·83 | 35 | 25·41 | 39 | 25·58 | 44 | 14·93 | 44 | 16·15 | 36 | 23·07 | 42 | 20·63 | 30 | 20·17 | 38 |
| Monsoon Rabi .. | 4·76 | 14 | 2·65 | 14 | 4·45 | 18 | 3·95 | 20 | 1·99 | 18 | 8·43 | 18 | 4·79 | 14 | 5·96 | 20 |
| Late Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 24·89 | 52 | 29·26 | 57 | 31·75 | 69 | 20·94 | 69 | 21·67 | 56 | 34·11 | 63 | 27·07 | 47 | 27·08 | 62 |
| Average .. | 29·92 | 29 | 30·08 | 38 | 37·32 | 50 | 31·09 | 40 | 28·22 | 49 | 36·39 | 44 | 27·92 | 38 | 27·35 | 42 |

*General characteristics.*—Except in the hilly parts of Modása, where the supply is sometimes considerable, the rainfall throughout the district is generally very light.

*Remarks.*—Rainfall generally below average except in south where it was up to average. Fair preparatory showers of Rohini fell at end of May and there were local showers of Mrig in some places in north, where early sowings of rice, bájri, &c., commenced. But general sowing rain came late in Ardra at end of June. July rain was everywhere seasonable and sufficient for full kharíf sowings of juár, bájri, cotton, maize, &c., and for rice transplantation. August rain was also on the whole sufficient and seasonable. But the fall in September and October in Uttara and Hast was scant, and the ripening crops, especially rice, suffered in outturn except where helped by irrigation. Owing to the failure of late rains rabi was not sown to usual extent and the crops were only fair. Season on the whole fairly good, and outturn "much better than that of the preceding year." Kharíf outturn of juár and bájri was generally good (14 to 18 annas) except in Dholka and Dhandhuka, where only 8 to 10 annas. Rice fair in north (12 to 14 annas); elsewhere poor (6 to 8 annas). Rabi outturn was generally estimated at 10 to 16 annas.

# APPENDIX A.

(*Referred to in para. 38.*)

*Exports of Indian Wheat from Bombay to all Ports beyond the Presidency from 1880—1890.*

| Months. | Year. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. | 1890. |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... | 2,927 | 21,768 | 85,674 | 31,019 | 15,285 | 41,846 | 31,424 | 44,235 | 12,090 | 47,591 | 22,795 |
| February ... | 1,626 | 19,275 | 40,239 | 25,403 | 15,933 | 32,366 | 24,484 | 21,379 | 14,419 | 18,567 | 7,653 |
| March ... ... | 3,407 | 20,000 | 30,557 | 29,516 | 14,997 | 45,824 | 28,402 | 26,595 | 23,729 | 26,949 | 9,191 |
| April ... ... | 4,985 | 32,481 | 30,390 | 37,503 | 15,230 | 38,933 | 71,581 | 75,325 | 67,400 | 30,649 | 36,907 |
| May ... ... | 17,110 | 42,428 | 67,886 | 76,205 | 44,831 | 56,871 | 124,232 | 101,018 | 118,586 | 41,838 | 49,386 |
| June ... ... | 19,407 | 52,236 | 37,1[illegible] | 82,881 | 54,894 | 66,602 | 56,341 | 113,946 | 66,165 | 15,934 | 26,745 |
| July ... ... | 15,055 | 47,369 | 19,383 | 55,921 | 65,437 | 33,379 | 38,715 | 20,172 | 32,841 | 20,382 | 25,562 |
| August ... | 7,832 | 28,172 | 5,396 | 32,425 | 45,546 | 38,004 | 52,896 | 12,657 | 32,472 | 23,129 | 15,362 |
| September ... | 4,193 | 35,132 | 13,797 | 36,265 | 30,974 | 48,975 | 55,461 | 14,778 | 29,514 | 17,796 | ..... |
| October ... | 6,527 | 48,835 | 22,317 | 18,466 | 19,045 | 52,808 | 51,166 | 14,106 | 46,241 | 21,390 | ..... |
| November ... | 8,652 | 76,714 | 34,159 | 29,319 | 28,038 | 59,598 | 37,584 | 17,383 | 28,058 | 17,716 | ..... |
| December ... | 22,991 | 48,559 | 32,703 | 34,508 | 27,806 | 53,977 | 53,433 | 11,129 | 23,022 | 31,569 | ..... |
| Total ... | 114,712 | 472,969 | 419,694 | 489,431 | 378,016 | 569,183 | 625,719 | 472,723 | 494,537 | 313,510 | ..... |

# APPENDIX B.

*(Referred to in para. 33.)*

*Exports of Indian Wheat from Karáchi to all Ports beyond the Presidency from 1880—1890.*

| Months. | Year. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. | 1890 |
| | Tons. | Tons. | Tons. | Tons, | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| January ... | 1,487 | 1,163 | 16,794 | 8,161 | 8,832 | 12,023 | 27,926 | 4,420 | 1,325 | 29,514 | 27,607 |
| February ... | 4,677 | 409 | 5,390 | 19,158 | 14,438 | 21,745 | 13,619 | 2,090 | 1,794 | 10,074 | 18,174 |
| March ... ... | 2,792 | 182 | 2,296 | 15,767 | 21,110 | 31,204 | 13,542 | 304 | 1,111 | 11,365 | 11,409 |
| April ... ... | 1,160 | 820 | 3,105 | 20,356 | 8,533 | 19,648 | 7,975 | 20 | 461 | 19,271 | 7,656 |
| May ... ... | 1,819 | 1,647 | 5,276 | 4,830 | 6,752 | 12,511 | 12,326 | 1,539 | 4,995 | 11,186 | 12,012 |
| June ... ... | 893 | 1,055 | 7,833 | 21,289 | 9,683 | 13,612 | 20,531 | 7,621 | 15,313 | 24,137 | 18,746 |
| July ... ... | 808 | 3,439 | 7,516 | 39,198 | 14,001 | 29,768 | 24,299 | 7,698 | 15,921 | 46,366 | 54,553 |
| August ... | 217 | 2,300 | 8,282 | 33,013 | 23,733 | 35,476 | 11,331 | 2,098 | 19,826 | 32,209 | 46,919 |
| September ... | 172 | 7,809 | 10,012 | 11,946 | 18,343 | 28,716 | 17,563 | 181 | 24,291 | 28,263 | ... .. |
| October ... | 351 | 12,207 | 11,023 | 11,815 | 21,326 | 40,741 | 18,781 | 3,081 | 17,836 | 34,647 | ..... |
| November ... | 955 | 18,575 | 23,571 | 17,264 | 27,331 | 30,376 | 4,487 | 3,609 | 25,765 | 52,626 | ..... |
| December ... | 647 | 20,280 | 16,910 | 14,551 | 18,869 | 46,116 | 6,581 | 2,960 | 24,842 | 49,068 | ..... |
| Total ... | 15,978 | 69,686 | 118,008 | 217,348 | 192,951 | 321,936 | 178,961 | 35,621 | 153,480 | 348,726 | ..... |

# APPENDIX C.

*(Referred to in para. 73.)*

*Introduction of Cream Separators.*

In 1888 the Dairy Supply Company, Limited, asked for information with reference to dairying in India. My *locum tenens*, Mr. Muir-Mackenzie, suggested the desirability of the deputation to Bombay of an Agent, with separators and other machinery, pointing out the insufficiency of the ghi supply of the country and the large importations of foreign cheese and butter and giving his opinion that the separator would lead to economy. At the end of 1889 the Company deputed Mr. Henry A. Howman, a gentleman farmer, who has long been interested in improvements in dairying, and a dairy assistant, with instructions to "ascertain by trial whether the cream separator is needed in India, and whether it can be profitably utilized in the manufacture of ghi." Mr. Howman made an extended tour in various Presidencies, visiting certain agricultural shows and centres of ghi-manufacture, having first taken advice from the Directors of the Agricultural Departments. In February 1890, I met him at the Nadiád Show and assisted in certain trials, designed to ascertain whether the customary products of milk in India can be made from separated milk. It was proved that "ták", a by-product in native ghi-making, can be made from separated milk, as easily as from the residue of milk after butter has been churned. Attention was paid to this minor point simply because it will take time to accustom the people to new products. It is obvious that "ták" is made, because the people cannot separate milk from cream without boiling or souring. Fresh separated milk is superior to sour "ták", but as along as "ták" is preferred, it can be made.

2. Máwa or khawa is another favourite product, made from whole milk. It is milk dessicated and sweetened with pounded sugar. At Nadiád and afterwards, it was shown that máwa can be made from separated milk, the cream being saved for butter or ghi. The product is of course inferior to máwa from whole milk, but again the possibility of making palatable máwa from separated milk and thus placing a máwa within the means of persons now unable to afford it, has been demonstrated. In the market, much of the máwa sold is made from partially skimmed milk and it is sometimes admixed with flour. Máwa made from separated milk is not inferior to this.

3. It has been demonstrated that as much ghi can be made from cream separated from a given quantity of milk as from an equal quantity of whole milk. The quality is superior and the residue is sweet fresh separated milk containing all the sugar and solids of the milk in lieu of a soured residue of ták (buttermilk). In time, separated milk must replace much whole milk now consumed as a beverage or for cooking or for making máwa; and the cream, saved, will go towards increasing the available supply of ghi. This will especially be the case in large towns.

4. Encouraged by the experimental results, I solicited sanction to retain the services of Mr. Howman's assistant, Mr. Keventer, a trained dairyman, for one year from the middle of June, and to purchase the 'Windsor' and 'Baby' separators together with cheese and butter-making machinery.

A ready demand for the fresh cream, superior butter and cream cheeses, arose among the European population of Poona during the rains. A less ready demand has arisen for the separated milk, but after a time, it was very easy and still is, to dispose of all the separated milk manufactured, at profitable though low prices. It does not pay me so far to purchase milk in large cities to manufacture ghi, because the price of ghi is weight for weight less than that of butter, though a given quantity of butter will not yield more than 80 per cent. of ghi. The reason is that ghi is made in villages where there is no sale for milk. It must not be supposed from this remark that ghi is necessarily a further product from butter, as "butter" is understood among Europeans. Butter is made from cream and after churning is carefully and frequently washed to get rid of the buttermilk which contains fermentable ingredients which would prevent the butter from keeping. To make ghi, the butter fat is collected with unavoidably a considerable admixture of buttermilk, containing casein and milk sugar. It is then heated over a slow fire to drive off the water, but this process does not drive off either casein or milk sugar. The addition of water is studiously avoided. The result is that ghi thus made contains fermentable products. The best keeping ghi would be made from well washed butter, but the quantity would be less and the price would be raised proportionately. Nevertheless such ghi would in time find a regular use among Europeans, who from long experience of the inferior, dirty, adulterated stuff procurable as ghi from the market have contracted a most reasonable prejudice against ghi, which is most unreasonable against really good ghi, for cooking.

I have now established a working dairy in Bombay with the result that some purchasers of separators have already been found. Without Mr. Keventer's assistance to set up the machines and to instruct purchasers in their manipulation it would be rash to expect that purchasers would ever be found. Considerable interest has already been excited in Bombay not only among the Europeans and Parsis, but among professional butter and sweetmeat

makers. Some facts have come to light. One that ice-creams as sold by confectioners are wrongly so called being made of whole milk with perhaps some cream added. Confectioners are not therefore greatly tempted by the new facilities offered and will not be till a better quality of "ice-cream" is in demand.

5. The importations of cheese are large and hitherto no demand for cheese has arisen among Hindus, because for cheese making the milk is coagulated with animal rennet and all animal products save milk are prohibited. It has long been known that the berry of "Withania coagulans" which grows wild in Sind and is called the Puneria berry has the property of coagulating milk.

Under my instructions, Mr. Keventer has made careful experiments with the berry. The information on record was that "one ounce of the fruit of W. coagulans and 1 quart of boiling water make a decoction, one table spoonful of which will coagulate a gallon of warm milk in about half an hour." After many trials, Mr. Keventer has succeeded in coagulating milk with the vegetable rennet. He has found the best results from using the following recipe: "Dissolve 4 ounces of common salt in a quart of water, warm the solution to 110°F and pour the heated solution into a vessel containing 5 ounces of the berry. After 24 hours, strain. Eight ounces or nearly ½ pint of the extract will curdle 2 gallons of milk at 86°F."

He reports that this extract coagulates milk as perfectly as the commonly used animal rennet. When milk is coagulated with Withania rennet and the whey filtered off, the filtrate (whey) gives no precipitate with acetic acid, showing that no casein is left in the whey, and that the coagulation is perfect.

It will take years to teach the Hindu to avail himself of this hitherto unknown because forbidden, product, but its utility to the field labourer is especially evident.

Cheese has been made from whole milk with animal rennet; but much has to be studied as regards its ripening in this country before it can be put freely into the market.

Curd cheese from separated milk, a nutritious and cheap food, has been successfully made.

6. Enquiry has arisen as to the possibility of making butter as well as cheese to supply the local demand for tinned butter and foreign cheese. There is little difficulty in the way. All that is wanted is the capital to manufacture in places, where milk is cheap, on a sufficiently large scale. The Industrial Association of Western India has wisely taken the matter into consideration. There is money to be made in it and it is hoped that private individuals will soon recognize the fact.

7. I have offered to undertake the departmental supply of cow's milk and buffalo butter to the Military Hospitals in Poona in order to secure a regular demand to enable me to extend my experiments with various milking breeds of cattle. Sanction is still awaited, but Mr. Keventer has proved that both cow's and buffalo's milk in this country are superior to the average milk in England, as the following analysis will show:—

| Analysis of Buffalo's milk in Poona. | | Average Analysis of Cow's milk in England. | |
|---|---|---|---|
| Water ... ... ... | 82·78 | Water ... ... ... | 87·25 |
| Fat ... ... ... | 7·05 | Fat ... ... ... | 3·50 |
| Casein ... ... ... | 5·31 | Casein ... ... ... | 3·50 |
| Sugar and salts ... ... | 4·86 | Sugar and salts ... .. | 5·75 |
| | 100·00 | | 100·00 |

The proportions of casein and of butter fat are very high. The results of the analysis are corroborated by practical results with the separator. On the average at Poona, 8 gallons of buffalo's and cow's milk have given 6 and 4 lbs. of butter respectively. This richness of milk would hardly be credited if it were not proved by repeated estimations.

8. Mr. Howman, before leaving for England, lent a separator to the European General Hospital, Bombay. The results were satisfactory. Dr. Collie wrote: "By passing the whole milk through the separator, sufficient cream is obtained to make all the butter required in the hospital and the separated milk is utilized for cooking as well as for those patients who are kept exclusively on milk diet. Given this way, buffalo milk loses its peculiar flavour so distasteful to many, is more agreeable to the patients, and appears to be more easily digested." Dr. Collie has indented for a complete set of dairy machines for the use of the hospital.

I may add that separated milk has been found very useful in the Scottish Orphanage at Máhim, whence the following testimony is received:—

"Apart from its dietetic values the separated milk enables us to save one-third of the tea and sugar formerly consumed without increasing the milk bill."

Mr. Howman left on record a scheme for dairy work in India, suggesting the lines on which the enquiries and experiments should be made to ascertain the standard by which Indian milk should be judged for purity, *i. e.*, freedom from water and the normal standard of butter fats.

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No. 1043 of 1892.

From

E. L. CAPPEL, Esquire, C. S.,
Director, Land Records and Agriculture,
Bombay;

To

The CHIEF SECRETARY to GOVERNMENT,
Revenue Department,
Bombay.

*Poona, 9th May 1892.*

Sir,

I have the honour to submit the **eighth** Annual Report of the Department of Land Records and Agriculture, for the year ending 31st October 1891.

2. The office of the Director was held as under :—

| Name of Officer. | From and to what date. | Total period. | |
|---|---|---|---|
| | | *M.* | *d.* |
| Mr. E. C. Ozanne ... ... | 1st November 1890 to 7th April 1891 ... | 5 | 7 |
| Dr. T. Cooke ... ... ... | 8th April to 31st May 1891... ... ... | 1 | 23 |
| Mr. E. L. Cappel ... ... | 1st June to 31st October 1891 ... ... | 5 | 0 |
| | | 12 | 0 |

Mr. Ozanne visited Dhárwár, Belgaum and Sholápur in November, and Bijápur, Kánára and Ratnágiri in January and February, to discuss with the Collectors measures for the accommodation of Survey Records. In March he again visited Dhárwár and Belgaum to complete arrangements for the introduction and re-distribution of Circle Inspector staff and for the transfer of Survey Records. From November to March, Mr. Ozanne visited Bombay eight times : once under Government orders to confer with Mr. Hallen, the General Superintendent of Horse-breeding Operations, and Mr. Morgan : twice on business connected with the experimental dairy and at other times to confer with the officers concerned on matters relating to the winding up of the Survey, the establishment of a Civil Veterinary Department and the transfer to Poona of the Compiling Branch of the Trade Statistical Office. He also attended a meeting of the Chamber of Commerce at which Mr. James' proposals for the regulation of the cotton trade were discussed. Mr. Ozanne paid one visit to the Bhadgaon Farm in January, and two visits to Nadiád in December, and in that month was in camp in the Poona District for purposes of special enquiry. Dr. Cooke visited Mahábaleshvar twice; in April to confer with Government and in May to attend the Horticultural Show. In May he also made a short tour of inspection in Belgaum and Dhárwár. I inspected the Bhadgaon Farm with the Superintendent of Farms in August and went to Belgaum in October to discuss with the Collector matters regarding the gradation of Circle Inspectors in the district.

3. Mr. Mollison took charge as Superintendent of Government Farms in November. He paid occasional visits to Bhadgaon and Nadiád and has been constantly present on the Poona Farm. His time has necessarily been largely taken up in study of the Agriculture of the Presidency and of Native live-stock. In December he made with the sanction of Government an extended tour in Upper India in company with Mr. Hallen, visiting Ulwár, Hansi, Bábugarh Meerut, Delhi, Ajmere and Khándwa. He also visited Ahmedabad and Cutch to attend the local Shows.

4. For the administration of the Agricultural staff in the Southern Division, I have had since May the assistance of an experienced Survey officer. The first appointment as Divisional Inspector, Land Records and Agriculture, Southern Division, was held by Mr. Francis and, on his transfer to Berár, Mr. Lushington was appointed, Mr. R. T. Wingate holding charge for an interval of 2½ months. Owing to these changes no tour of inspection was made by the officers named and they were fully occupied at head-quarters in organizing the new staff.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

Circle Inspectors.

5. As described in the last report, paragraphs 5—7, the inspecting staff has been introduced into the districts of the Southern Division, except Kolába, where owing to the non-completion of the revision survey the records will not be ripe for transfer to the Collector's charge until 1893. The staff was established in the other districts in April except in Ratnágiri, where its introduction was deferred till August. The number of Circle Inspectors now fixed in consultation with the Commissioner, for the five districts in which the staff has been introduced, is shown below :—

| District. | Former Number of Bhág Kárkúns. | Number of Circle Inspectors. | | | Number of old Bhág Kárkúns now left for Mámlatdárs' Office Staff (column 2 — column 3). |
|---|---|---|---|---|---|
| | | Bhág Kárkúns utilized as Circle Inspectors. | Additional hands. | Total Number. | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Dhárwár ... ... | 28 | 6 | 23 | 29 | 22 |
| Bijápur ... ... ... | 25 | 9 | 16 | 25 | 16 |
| Belgaum ... ... | 21 | 7 | 18 | 25 | 14 |
| Kánara ... ... ... | 33 | 9 | 15 | 24 | 24 |
| Ratnágiri ... ... | 29 | ... | 27 | 27 | 29* |
| Total ... | 136 | 31 | 99 | 130 | 105 |

* Proposals have been made to reduce the number from 29 to 27 as recommended by the Committee of July 1890.

Out of the men under column 4, 80 per cent. have under the orders of Government been selected as far as possible from the Survey Department; where this number has not been available the vacancies have been filled up temporarily. The number of Circle Inspectors was reduced under the revised scheme from 39 to 29 in Dhárwár, and from 40 to 25 in Bijápur. Their duties are strictly prescribed under rules, now issued. Many of these duties were formerly assigned to Bhág Kárkúns, and the relief of these officers from out-door inspection is completed by recent orders directing that in districts where the Circle Inspector staff is established they should not be called upon to examine rayats' receipt books. The Bhág Kárkúns will henceforth be used as full-time men for the strengthening of the Mámlatdár's head-quarter establishment.

6. One Circle Inspector has been attached to each District Inspector as a general-duty classer and to assist in checking measurement work.

7. The Collectors of Ratnágiri and Kánara remark as follows on the Circle Inspector staff in their districts :—

*Ratnágiri.*—" The Circle Inspector establishment is, as you know, a weak one in this district, being only about 3 to each táluka * * *. The absence of village officers, the extraordinary ruggedness of the country, and the fact that cultivation, poor as it may be, completely covers the whole country, make it necessary that Ratnágiri should have a strong Circle Inspector staff. But while we cannot rest content with what we have got, it is a great thing to have made a beginning, and in a year or two we shall be able to say from experience how many additional hands we require."

*Kánara.*—" The men chosen are of course as yet ignorant of measurement and other survey details. They will no doubt gradually learn this important preliminary to effective work. Most of them were chosen for their ability and previous good work

and they have all had experience of Bhág Kárkún's duties. They cannot be said to be contented in their new position as they consider that the increased amount of work that they will now have to perform, and the greater responsibilities of their new duties, should have been accompanied by an increase of pay. At the same time I do not suppose that they will be wanting in activity and energy."

As regards Ratnágiri, detailed proposals for the re-organization and strengthening of the village staff are under consideration of Government. The circumstances of the district are peculiar and some modification of the general scheme may be necessary. In Kánara the proportion of non-Survey men is temporarily somewhat large, for the reason that Survey subordinates could not hitherto be spared, but in 1892-93 the disbandment of the Survey will make men available.

8. In all the equipped districts a Survey class was formed during the year to train the unskilled men, and an examination was held in the following subjects:—

(1). The Circle Inspector's revised Rules.

(2). The Revenue Manual (so far as it concerns the work of Circle Inspectors).

(3). Rules as to maintenance and repairs of boundary-marks.

(4). Simple measurement including sub-division of numbers in the fields and preparation of field books and plotting on the map.

A class for practical instruction in Survey work for all men not recruited from the Survey Department, was formed at each District head-quarters during September—October before the examination under the supervision of the District Inspector.

Departmental Rules.

9. The old rules prescribed for Circle Inspectors in Dhárwár and Bijápur have been carefully revised and brought up to date and have received the sanction of Government. To suit the special circumstances of the Ratnágiri District they require considerable modification, and special rules for this district are being drafted. Rules for the guidance of the Divisional and District Inspectors and of the District Survey head-quarter office, have also been drawn up.

10. *District Offices and District Inspectors.*—Each district is equipped with a head-quarter office of the strength noted, for the correction and maintenance of Survey Records. This staff works directly under the District Inspector (pay Rs. 100 — 150). The District Inspector also compiles and reviews for the Collector the Annual District Returns of Agricultural Statistics. He is required to travel for about 8 months during the year, to take tests of Circle Inspectors' work. The supervision of the Circle Inspector staff and the systematic test of their inspection work remains, however, a primary duty of Mámlatdárs and Sub-Divisional officers.

| | Pay. |
|---|---|
| Head-quarter Assistants ... | Rs. 35 |
| Record-keeper ... ... | „ 20 |
| Record-kárkun ... ... | „ 12 |
| Daftarband ... ... | „ 10 |

Two of the District Inspectors are graduates who have qualified in the Revenue Department for a Mámlat. Two were transferred from the Survey Department. In Belgaum the post is held by a passed Agricultural Student of the College of Science, who had previously served for 6 years as Assistant District Inspector.

11. *Divisional Inspector.*—The duties of this office were described in paragraph 6 of last year's report. While for administrative purposes a Divisional Officer, the Divisional Inspector is, for the maintenance of the Survey Record and in all technical matters, an assistant to the Collectors, and the scheme has worked so far well and without friction.

12. *Subordination.*—The inspecting staff from the District Inspector down to Circle Inspectors is now directly subordinated to the Collector. But as the Director is held responsible for the correction and maintenance of maps and Survey Records and for the maintenance of the standard of efficiency among Circle Inspectors, new appointments of Circle Inspectors are made by Collectors in consultation with the Director. As regards the technical staff (District Inspector, Head-quarter Assistant, Record-keeper and general-duty classers), the Divisional Inspector has been empowered to make the selection subject to the Collector's confirmation.

13. *Survey Records.*—For the accommodation of the Survey Records transferred to the Collectors' charge, quarters have been provided in Belgaum and Kánara at a cost of Rs. 4,531 and Rs. 6,237. In Ratnágiri the Records are at present in temporary quarters. In Dhárwár and Bijápur accommodation has been provided without additional cost. To guard against accidents by fire the Records are housed in detached compartments, one containing originals and the other duplicates.

14. *Inspection.*—I now turn to the inspection work done during the year. The routine of the Inspector's duties is carried out under the heads noted below, a few changes having been made from last year :—

*November to February.*—Crop, waste and boundary-mark inspection.

*March to May.*—Complete boundary-mark inspection.

*June.*—Compilation in Mámlatdár's Office of Táluka Forms Nos. 33, 35, 36, 36A, circle by circle, and then for the táluka.

*July.*—Test census and check of vital statistics.

*August.*—Compilation at the táluka of Táluka Form No. 34 and of the Inspection Returns.

*September and October.*—Ledgering of village statistics and miscellaneous duties under the orders of the Mámlatdár.

*Note.*—Measurement and classification work and partitions will be carried out during the field season as prescribed in the Rules.

15. *Crop and Waste Inspection and Examination of Boundary Marks.*—This corresponds to the test of Village Forms 2 to 4 by táluka kárkuns (general duty) in districts not equipped with the Circle Inspector staff, with the exception that under special sanction Circle Inspectors examine the boundary marks of those numbers only of which they make the crop or waste inspection.

*Statement showing percentages.*

| District. | Year. | Villages inspected, per cent. | Crop Inspection. Occupied Lands, Percentage inspected. On Survey Numbers. | Crop Inspection. Occupied Lands, Percentage inspected. On Area. | Waste Inspection. Unoccupied Lands, Survey Numbers inspected per cent. |
|---|---|---|---|---|---|
| Dhárwár ... | Last ... | 97 | 7·73 | 5·63 | 27·17 |
| | Present ... | 86 | 7·42 | 5·19 | 28·30 |
| Bijápur... ... | Last ... | 95 | 10·09 | 8·39 | 36·77 |
| | Present ... | 76 | 8·41 | 7·46 | 35·60 |

There is some falling off in the amount of work done as compared with last year. But most of the Circle Inspectors were employed in connection with the general census for a large part of the inspection period ; in Dhárwár sickness was a hindrance; and heavy rain in Bijápur hindered operations for a fortnight. But the figures prove the need of more supervision, which has now been supplied in the appointment of the Divisional Inspector, and the responsibility of Táluka and Sub-Divisional Officers for the check of work done will, it is hoped, be better appreciated henceforth. The percentage of waste numbers inspected is satisfactory.

The inspection of waste brought to light 11 encroachments in Dhárwár and 4 in Bijápur, of which 1 only was detected by the village officers. The apparent improvement in Bijápur (where 54 cases were discovered last year) is probably not real. The cultivation of boundary strips, a common cause of check, appears this year to have been disregarded, and the matter is under enquiry.

Village crop registration by kulkarnis shows as yet no improvement in Bijápur and very little in Dhárwár. The number of entries found blank and filled in by Inspectors is greater than last year, nor is any improvement noticeable in the village officers' boundary mark inspection.

| District. | | Crop Inspection. | | Boundary Mark Inspection. | | |
|---|---|---|---|---|---|---|
| | | Entries found correct, per cent. | Corrected per cent. | Shown in Village Form III as in disrepair. | Omitted. | Wrongly shown as in repair. |
| | | | | Per cent. | Per cent. | Per cent. |
| Dhárwár. | Present ... | 42 | 38 | 12 | 49 | 39 |
| | Last... ... | 41 | 41 | 8 | 61 | 31 |
| Bijápur... | Present ... | 30 | 46 | 17 | 26 | 57 |
| | Last ... ... | 32 | 50 | 21 | 48 | 31 |

It is satisfactory that absentee kulkarnis fell from 19 to 10 and from 5 to 4 in the two districts respectively.

16. The superior check exercised by the District and Assistant District Inspectors is exhibited as follows in percentages :—

| District. | | Crop Inspection. | | Waste Inspection. | | Boundary Mark Inspection. | |
|---|---|---|---|---|---|---|---|
| | | Extent. | Quality. | Extent. | Quality. | Extent. | Quality. |
| Dhárwár. | Present ... ... | 3·5 | 90 | 3·9 | 99 | 3·5 | 98 |
| | Last ... .. | 3·3 | 85 | 3·1 | 95 | 3·2 | 95 |
| Bijápur . | Present ... ... | 5·1 | 78 | 4·6 | 99 | 5·3 | 91 |
| | Last ... ... | 3·0 | 65 | 4·1 | 99 | 3·2 | 92 |

In Dhárwár four circles were not visited and the number of Survey numbers tested was less by 50 than last year. This was because the District Inspector and his Assistant were both for some weeks on special duty. The percentage check is greater in both districts. The figures of quality show an improvement in Circle Inspector's work.

The Collectors' remarks on the Circle and District Inspectors' work are shown below :—

*Dhárwár.*—"The test work done by them appears to be sufficient."

*Bijápur.*—"The amount of work done by the Inspectors is much less than was the case last year; but that is fully accounted for by the fact that it was necessary to utilize the Circle Inspectors on census duty for nearly four months out of the travelling season. * * * The personal work done by Mr. Náik (District Inspector) and his Assistant has been good, and the undersigned concurs with his predecessor, Mr. Fleet, that since Mr. Náik came to the district the working of the department has gone much smoother, and for that Mr. Náik is undoubtedly entitled to the credit."

17. As regards the supervision and test of Circle Inspectors' work by the Sub-Divisional Officers, the Collector of Dhárwár has forwarded a statement of tests taken by the 1st Assistant Collector and the District Deputy Collector, no tests by the 2nd Assistant Collector being reported. The 1st Assistant Collector took tests in 82 villages and the District Deputy Collector in 65 villages, in connection with crop and boundary-mark inspection and the census check. But the extent of the test and its nature are not reported. The only remark as to quality made by the District Deputy Collector is that the Circle Inspectors' work was good. A report has been received from the District Deputy Collector only in Bijápur. He tested crop and boundary-mark inspection in 46 Survey numbers of seven villages, and complete boundary-mark inspection in one village. With a few exceptions the work was found satisfactory. Check census was also tested in three villages. Until a prescribed form for these reports is sanctioned the value of these tests must be in great measure lost.

18. *Check Census of Population and Live-stock.*—The check census period is now reduced to one month (July). Under the old rules every village was to be visited for this test, but by the revised Rules each circle is divided into two to four divisions according to the number of villages in the circle, population, and means of locomotion, and one division is to be be visited annually. This year, as last, delay in commencement of the test work arose from the detention of Circle Inspectors at the táluka head-quarters for compilation work and in Dhárwár the absence of Kulkarnis at the date of inspection was also an impeding

cause. The tests extended over 398 villages in Dhárwár and 317 villages in Bijápur and were made in accordance with rule.

Out of the total number of entries checked in Dhárwár and Bijápur, 79 and 81 per cent. (against 77 and 70 per cent.) were found correct. No tests were taken by District Inspectors. Though the responsibility of supervision and test primarily rests on Mámlatdárs and Sub-Divisional Officers, the District Inspectors should take casual tests of the census work during July, and instructions to this effect have been issued.

19. *Check of Village Sanitary Forms.*—Circle Inspectors are required to make a regular test of Forms XIV and XIV-A.D., along with the census check, the revised rules now providing for report of omissions and errors in Village Form XIV. The statements received show 66 and 173 omissions of births and 19 and 27 omissions of deaths in Dhárwár and Bijápur. In 31 cases for Dhárwár and in one in Bijápur, the cause of death was omitted, and in six cases for each district it was wrongly shown. These inaccuracies are communicated through Mámlatdárs direct to the Deputy Sanitary Commissioner. Government, while reviewing the last Annual Report of the Sanitary Commissioner, remarked on the improvement to be effected in the Village Sanitary Returns by the organization of the Circle Inspector staff, and the returns will now receive a regular examination supplying information of a precise kind which must eventually lead to better results.

20. *Complete Boundary Mark Inspection.*—This inspection was carried on from March to May in 104 villages in Dhárwár and 85 in Bijápur, bringing the total of villages inspected to date to 418 in Dhárwár and 530 in Bijápur. The completion of the inspection of the whole district in about 10 years, as estimated in last year's report, may, it is hoped, still be carried out, though the reduction of the Circle Inspector Staff from 39 to 29 and from 40 to 25 has necessarily diminished the rate of progress.

The number of marks found out of repair have decreased by 7 per cent. in Dhárwár, but have increased by 4 in Bijápur. Of the marks re-inspected, 70 per cent. in Dhárwár and 84 per cent. in Bijápur were repaired. Positions of 1,653 and 366 marks in each district were fixed by measurement, and 125 and 37 cases of encroachment were detected. Re-inspection in arrears has been partly but not completely brought up to date.

**Statement showing measurement and classing work done by Circle Inspectors.**

| No. | Classes of Cases. | Dhárwár. | | | | Bijápur. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Arrears on 31st July 1890. | New cases. | Disposed of. | Arrears on 31st July 1891. | Arrears on 31st July 1890. | New cases. | Disposed of. | Arrears on 31st July 1891. |
| 1 | Partitions of land under decree of Court ... | 2 | 74 | 73 | 3 | 3 | 20 | 21 | 2 |
| 2 | Sub-division on application of occupants duly sanctioned ... ... ... | 13 | 31 | 32 | 12 | 3 | 10 | 9 | 4 |
| 3 | Disputes necessitating re-measurement of fields .. ... ... ... | 32 | 57 | 55 | 34 | 8 | 34 | 32 | 10 |
| 4 | Disputes requiring fixing of marks by the field books ... ... ... | 154 | 188 | 163 | 179 | 143 | 278 | 282 | 139 |
| 5 | Encroachments ... ... ... | 91 | 206 | 229 | 68 | 67 | 237 | 240 | 64 |
| 6 | Measurement of alterations caused by alluvion and diluvion ... ... | 40 | 43 | 47 | 36 | 38 | 95 | 96 | 37 |
| 7 | Measurement of land required for public purposes— | | | | | | | | |
| | (a) Extramural burial grounds ... | 9 | 88 | 59 | 38 | 15 | 24 | 29 | 10 |
| | (b) Tanks ... ... ... | 2 | 3 | 4 | 1 | ... | 2 | 2 | ... |
| | (c) Roads ... ... ... | 17 | 21 | 21 | 17 | 7 | 20 | 21 | 6 |
| | (d) Dharmshalás and other public buildings ... ... ... | 3 | 13 | 13 | 3 | ... | 3 | 3 | ... |
| 8 | Measurement of land for building sites ... | 58 | 209 | 210 | 57 | 37 | 206 | 195 | 48 |
| 9 | Re-classification of survey numbers ... | 1 | 5 | 4 | 2 | 2 | 3 | 4 | 1 |
| 10 | Miscellaneous ... ... ... | 65 | 200 | 186 | 79 | 124 | 430 | 418 | 136 |
| | Total ... | 487 | 1,138 | 1,096 | 529 | 447 | 1,362 | 1,352 | 457 |
| 11 | Non-Survey cases prescribed by the rules... | 640 | 3,014 | 2,836 | 818 | 123 | 592 | 582 | 133 |
| 12 | Not prescribed by the rules ... ... | 40 | 337 | 348 | 29 | 3 | 123 | 113 | 13 |
| | Total ... | 680 | 3,351 | 3,184 | 847 | 126 | 715 | 695 | 146 |
| | Grand Total ... | 1,167 | 4,489 | 4,280 | 1,376 | 573 | 2,077 | 2,047 | 603 |

21. New cases in classes 1-10 very slightly decreased from last year. The increase in classes 1-3 and the decrease in class 5 are the natural effect of the new system, which greatly facilitates the division of land, the correction of marks and the check of encroachments. Classes 11 and 12 now no longer occur, the duties involved being carried out by the reinforced Mámlatdár's staff. Cases disposed of (classes 1-10) fell slightly in Bijápur, but considerably in Dhárwár, which is attributed to the reduced number of Inspectors (39 to 29) and their employment on census duty, but this will be remedied under stricter supervision, and meanwhile arrears have not appreciably increased.

22. The usual statement of Head-quarter office work is appended to show the correction accomplished :—

| District. | Number of Cases received necessitating corrections in Survey Record. | Number of Akarbands. | | Number of maps and field books corrected. | Number of extracts from Survey books supplied to Revenue Officers and petitioners. | Number of extracts from field books sent to Circle Inspectors. | Number of maps supplied to Village Officers. |
|---|---|---|---|---|---|---|---|
| | | Corrected. | Remaining for correction on 1st October. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Dhárwár . | 73 | 143 | 6 | 483 | 144 | 858 | 121 |
| Bijápur ... | 119 | 60 | 53 | 494 | 4 | 575 | 98 |

As regards the heavy arrears in Bijápur it is reported that all the Akarbands in column 4 were received as late as July last, and 20 of them were corrected by 1st October, but not copied fair in the Survey Record. Extracts from 591 Survey numbers out of classer's books were made in Bijápur to complete the duplicate Survey Record.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

23. The form of the Circle Book noticed in paragraph 19 of the last year's report is under consideration with reference to the directions of the Government of India issued with Government Resolution No. 7134, dated 16th October 1891.

## III.—COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

24. During the year no special measures have been called for under Chapter VI of the Bombay Famine Relief Code.

## IV.—MEASURES OF PROTECTION, including—

(1.) *Fodder Reserves and Arboriculture.*

(2.) *Extension of Communication.*

(3.) *Irrigation.*

25. No applications were received for Bábhul plantations on remission of assessment, and no new departure has been made under this head.

## V.—AGRICULTURAL EXPERIMENTS INCLUDING FARMS.

### *A.—Experimental Farms.*

26. A detailed scheme has been submitted to Government for the extension of Experimental Farms, for a Cattle and Sheep Farm, and for the improvement of the Poona Farm.

Mr. Mollison, the Superintendent of Farms, joined his appointment during the year, and his movements are referred to in paragraph 3 of this report. His assistance in the practical management of the Poona and Bhadgaon Farms and of the Model Dairy has been invaluable, and although it is too early to speak of results, I may confidently say that his appointment has been more than justified

in the improved supervision and working of the institutions in his charge. Mr. Mollison has used his opportunities to study the agricultural conditions of the Presidency with great zeal and success, and I expect in next year's report to be able to refer to distinct advances in more than one direction made with his assistance. For two months in the year he lectures to the Agricultural classes at the College of Science and is now engaged on the preparation of a much-needed text book for their use.

**Bhadgaon Farm.**

27. The rainfall (29 inches) though much above that of the previous year was not well distributed. The greater part fell by the first week in August, and the result was that both the principal crops, cotton and jowári, suffered. The former, especially the American variety, was injured by the heavy fall in early August, and the latter by deficient rain at the time of flowering. Irrigation had to be resorted to for all rabi crops, but the Jámda Canal went dry before they were harvested. The indifferent season and low prices have led to a comparatively poor financial result. The net profit per acre was about Rs. 4 as against Rs. 10 in the previous year. Besides the Superintendent's pay (Rs. 3,000), the net cost of the farm was Rs. 6,827 as against Rs. 743 in the previous year. Nearly half of this loss was debited to live-stock, which depreciated in value by Rs. 1,000 through an epidemic of rinderpest and was maintained at a loss of Rs. 3,015. I have, however, considerably reduced the Mysore herd which was being maintained at a cost disproportionate to its value.

*General Cultivation.*

*Jowári.*—Besides the local variety, the Jalálpur (Surat) and Jabalpur (Central Provinces) varieties were grown. The Jabalpur millet seems not to differ from the common sort. The Jalálpur also has not proved itself better than the Khándesh variety. On the whole, the outturn was fair, but prices were so low that but for its fodder value the crop would not have paid for cultivation.

*Bájri.*—Nadiád "bajro," a giant variety, formerly unknown in Khándesh, was sown on a plot and attracted much attention owing to the large size of its ears and the sweetness of the grain. The experiment is being continued.

*Wheat and Gram.*—The wheat and gram area was irrigated. A wheat crop sown in rows 8″ apart was found to yield better than one sown according to custom at distances of 12 inches.

*Experimental Area.*

As in the previous year the most interesting experiments were in cotton and wheat.

*Cotton.*—Broach cotton was tried on the farm for the first time and was not found to succeed. Samples of the varieties previously grown were submitted to the Chamber of Commerce, but the result is inconclusive as, owing to their proximity to a field which was irrigated throughout the season, the plots of Varádi, Dhárwádi, Bani and Jari got sufficient moisture, while the other cotton plots were withering for want of it. The American varieties, (except Upland), grown in experimental plots and richly manured, yielded poorly. Jari cotton introduced last year from the Central Provinces gave an extraordinary crop and ripened in November instead of in February, its normal season. This goes, as the Superintendent observes, to confirm Dr. Watt's hybridization theory. The local Varádi has in a single year's contact shortened the staple and reduced the period of maturity, and has assimilated the new variety to itself also in quantity of outturn. The experiment with Sea Island Cotton has been abandoned; the plants which are perennial, dying the year after planting.

Permanency of colour and consistency of wheat.

The second series of experiments to test the changes in the colour and consistency of wheat was commenced. Contrary to past experience the new seed produced better results in its first year than the local seed. This may partly be due to some accidental advantage; and hard white, which gave the best results, is not a stranger to this district. A small plot was sown with the valuable

Muzafarnagar soft white with most satisfactory results. Again no change in colour or consistency was noticed, and it may be taken that these outside wheats are stable when grown in the Deccan.

*Sugarcane.*—The two Cuban varieties of sugarcane (Lahona and Lohina) obtained from Saháranpur, which last year compared unfavourably with the local white variety, tillered well and have shown valuable qualities, which will be further tested at the Poona Farm.

*Other experiments.*—The Kademi or Kabuli gram from Cawnpore and the huskless barley from Saháranpur yielded fairly well. Potatoes were tried but not with success. The seed was from the Poona District, where fungoid disease has prevailed during the last four years and the crop was attacked by this blight.

*Manures.*—A large number of manures were tried but with irregular results, and all that can be deduced at present is that farm-yard manure and oilcake as commonly applied by cultivators are more profitable than chemical and other expensive fertilizers. Green manuring is being tried with success. The "patent silicate manure" was tried at the request of the Bombay Chamber of Commerce and was applied to irrigated wheat at the rate of 5 cwt. per acre. It did not appear to benefit the crop either in appearance or in yield.

*Fodder Crops.*—Jowári, Rheana Luxurians and lucerne were grown experimentally. Lucerne weight for weight showed a great superiority to jowári and the Rheana Luxurians, an African plant, now first introduced, promises well and will be more largely tested next year.

*Ensilage.*—A new feature was introduced by the trial of stack silage, but it was found that the wastage was so heavy as to counterbalance its advantages over the pit system in facility of construction and in superior sweetness of fodder.

*Cattle.*—During the year 27 bull-calves averaging 18 months were sold for the satisfactory sum of Rs. 1,080. The Mysore herd has been thinned by weeding out, with great advantage. The goat herd has been largely increased by additions from the best Native and Arabian breeds, and besides being a source of profit it is hoped to effect a good deal in the way of improving the local strain.

**Poona Farm.**

28. The cultivated area of the farm is 34½ acres, of which 3 acres are devoted to experiment. The farm was maintained at a net cost of Rs. 3,754 of which Rs. 95 were debited to the dairy herd.

Among other experiments one with sugarcane has been conducted on this farm with the objects (1) to test how long it can be grown without replanting, with proper tillage and manure; (2) to ascertain which of the manures ordinarily applied gives the best results; and (3) to show what crops can profitably be rotated with cane. The plots however have been found to be too uneven in quality to give certain results. The whole scheme of experiment will now be reorganized under Mr. Mollison's care. A fairly good area for the purpose has been found, and special attention will be paid to newly introduced plants, to manures, and to fodder crops at this farm.

*Dairy Herd.*

The farm is now well stocked, the present strength being 55 head. The dairy is being worked at a profit with the improved European appliances and has furnished a model for similar establishments in other parts of India. It meets the whole of the Commissariat demands for milk products and has given a decided impetus to the adoption of scientific dairy methods. As some details of the dairy operations may be usefully published, I follow the example of last year's report in printing an appendix (A) dealing with this subject.

The Ganeshkhind gardens worked at a net profit of Rs. 54. The year was a poor one for mangoes and only Rs. 85 were realized. Rs. 87 were realized by the sale of mango grafts.

**Nadiád Farm.**

29. There is not much new to report about this farm except that, at the instance of Mr. Ozanne, an agricultural passed student has been appointed to

take charge of the farm and that the seed depôt, hitherto kept up at a loss, has now succeeded in attracting customers. The Superintendent of Farms has drawn up a cropping scheme for six years for this farm. It was cultivated at a loss of Rs. 11¾ per acre, the cultivated area being only 7 acres and 26 gunthas.

**The Sind Farm (Hyderabad.)**

30. The Hyderabad Farm, under the charge of the Local Board, was worked at a loss of Rs. 524. The future of this farm, which the District Board no longer desires to keep, is under consideration.

**Empress Gardens.**

31. The gardens were worked at a cost of Rs. 3,022 or Rs. 400 less than in the previous year. The gross expenditure amounted to Rs. 9,052, being Rs. 338 under the budget grant, and the gross receipts rose from Rs. 5,592 to Rs. 6,030.

The large sales of seeds of vegetables and forage plants are a particularly satisfactory feature in connection with these gardens, and under the new management better results both in this respect and as regards the floral management may be confidently looked for. The gardens have efficiently fulfilled their object of supplying seeds to soldiers and of affording a recreation and botanical garden.

*B.—Experiments on various Indigenous and Exotic Products.*

**1. Wheat.**

32. The distribution of selected Muzaffarnagar seed was continued in the Nára Valley of the Thar and Párkar District, 339 maunds of fresh seed being purchased with the Government grant of Rs. 1,000, and the sum allotted by the District Local Board. The area under the introduced variety fell from 4,107 acres to 3,166 acres or by 23 per cent., but has maintained its proportion to the total area under wheat. A low inundation and the prevalence in parts of mildew reduced the acre rate of produce from 392 to 259 lbs. The following table gives the details :—

| Kind of Seed. | Area. | | Seed. | | Outturn. | |
|---|---|---|---|---|---|---|
| | A. | g. | Mds. | s. | Mds. | s. |
| New seed imported by Government ... | 252 | 35 | 338 | 39 | 1,019 | 14 |
| Acclimatized seed being Government share of previous year's produce ... ... | 477 | 5 | 623 | 8 | 1,858 | 20 |
| Acclimatized seed being Zamindárs' share ... | 2,436 | 19 | 2,764 | 8 | 6,856 | 21 |
| *Add*—Reapers' share ... ... ... | ..... | | ..... | | 523 | 2 |
| Total ... | 3,166 | 19 | 3,726 | 15 | 10,257 | 17 |
| Average per acre ... | ..... | | | 47·0 | | 129·5 |

*Note.*—1 Maund = 80 lbs.

Government have sanctioned a further grant of Rs. 1,000 and the experiment will be continued next season. Experience has shown that the Mithrau is better suited to wheat cultivation than the Khipra Canal and the cultivation of the introduced variety will next season be confined to the former.

**2. Cotton.**

33. Twenty lbs. of hand-ginned Dhárwár-American obtained through this department was sown on specially selected virgin land near Umarkot. The crop is reported to be very promising, but was not gathered at the time of report. The acclimatized American seed was also sown in a few small plots and is reported to have yielded fairly.

**3. Arrowroot.**

34. Mr. Gogte of Dápoli (Ratnágiri) planted, as last year, 10 acres with arrowroot. The Commissariat demand has been very short (only 12 lbs.), and though he has been able to sell some to the public, the bulk of the stock remains on hand.

#### 4. Coffee.

35. Mr. Gogte is experimenting also with coffee. He has a plantation of about 300 bearing trees, which produced on an average 2 lbs. of berries per tree. Mr. Gogte's experience is that in the Konkan the tree flourishes on reddish sandy soil four miles from the sea with water at from 12 to 15 feet from the surface. The trees require shade, and Mr. Gogte has dotted his plantation with jack-trees. A compost of pounded sesame straw, prickly-pear (Euphorbia neriifolia) and waste water from the arrowroot manufacture is said to form a good dressing.

#### 5. Borneo Tobacco.

36. The Borneo Tobacco seed received in April 1890 from the Government of India was distributed for experimental cultivation on the Bhadgaon, Hyderabad and Nadiád Farms. Only at Nadiád was a crop obtained, but the cost of cultivation was greater than the value. On the Bhadgaon Farm, owing to the unsuitability of the soil, the plants died after transplantation. At Hyderabad the plants grew vigorously throwing out good sized leaves until they were injured by wet in December and January. Damp further damaged the leaves in curing and rendered them unfit for use.

#### 6. Strawberry.

37. The Saháranpur strawberry plants grown at Mahábaleshvar are reported to be in a flourishing condition and this year's produce, exhibited in the local Horticultural Show, carried off a first prize. Some English strawberry plants have been obtained and distributed to local Mális and Dhávads.

#### 7. Indigo.

38. Indigo was persevered with in Junágad only, where owing to deficiency of rain, the outturn was smaller than in the previous year, 28 acres producing 4 maunds of the dye.

#### 8. Date-Palm.

39. From the reports received, the 1888-89 plantations are doing well, with plants 2 to 5 feet high everywhere, except in Porbandar, where hot winds killed many of the young palms. Seedlings from seed distributed in 1889-90 are healthy and about a foot high. This year again about 80 lbs. of seed, and 50 offsets were distributed. Except where sowing was retarded owing to late rain, the seed has sprouted well and seedlings are thriving. The offsets have also done well. A number of these are in the Ganeshkhind garden.

The large Sind plantations from Djereed seed are making good progress. Out of the seedlings raised in the Karáchi Municipal gardens 824 have been planted out with varying success. Seedlings have been planted in the Burns gardens to replace dead plants from the original plantation of Persian date, but in this plantation the nature of the soil is brackish and unfavourable. Roadside plantations have also been made, and others in good soil with water facilities. Dr. Kaka, the Acting Secretary, takes much interest in the experiment, and the results of these plantations under varying conditions of soil, situation and water, will be valuable as a guide for future plantations in Sind.

In some tálukas of Karáchi the seed has not germinated. In Hyderabad, Shikárpur and Khairpur, the plantations have lost many seedlings, but a good proportion have established themselves. Whether these trees will prove of use except for shade and ornament cannot be predicted for some years to come.

#### 9. Divi-divi.

40. The Bhadgaon Farm produce was sold locally for Rs. 90; this is an advance on the profit of last year and there are good hopes of an industry being established as the trees grow and their value becomes known.

#### 10. Potato Disease.

41. A potato disease has made its appearance for 4 or 5 years past in the Khed and Junnar tálukás and was brought to notice by me when Assistant Collector in the Poona District. It appears to be rapidly spreading and to have its origin in the exhaustion of the soil consequent upon long continued cultivation of this profitable crop. Many fields were this year an entire loss and the supply of locally grown potatoes has fallen off both in quality and quantity.

The disease, from a ring-like appearance on section of the tuber, is known to natives as the "Bángadi" or bangle disease. Its symptoms consist in arrested growth of the tuber and withering of the green top. It is often to be detected *outside* an apparently sound potato by a small livid spot. Later in its growth the potato rots away. Sometimes the disease appears in patches of the field, but more commonly all over it, sound plants and unsound being mixed together.

The nature of the blight is obscure. The cultivators have tried fresh seed from Poona, and selected local seed without doing much good. It is doubtful whether measures of a curative nature, such as the application of sulphate of copper and lime solutions in the form of spray, which have been satisfactorily adopted in France and Germany, can be adopted with success in this country. The introduction of sound seed potatoes grown in a distant soil untainted by the disease and of hardy constitution offers a possible remedy of a temporary nature. Such seed often shows powers of resistance, which for some years at least, may combat the evil.

Potato seed to the value of Rs. 300 has been imported from Sáharanpur, Mahábaleshvar, Bangalore and Ootacamund and is being distributed to cultivators on the following conditions:—

(*a*) Re-payment of the seed *in kind* after harvest.

(*b*) The seed to be sown *unmixed with other seed* and the result to be reported for the information of this Department through the Mámlatdár.

Potato seed of approved varieties purchased from Messrs. Sutton and Sons of Reading has been planted on the Poona Farm. The potatoes grown from this will come in for distribution next year as seed for the affected district.

*C.—Utilization of Bones for manure.*

42. The export of bones from the port of Bombay during the year under report amounted to 13,653 tons valued at Rs. 8,23,584, a decrease of about 16 per cent. Of the total, the United Kingdom took 85 per cent., and the rest was taken by Belgium, France and Germany, the last two markets being new ones.

Messrs. Croft and Wells of Bombay furnished 2¼ tons of their No. 5 bone meal for experimental purposes. It was tried both at the Bhadgaon and the Poona Farms, at the former on irrigated wheat and at the latter on sugarcane. The results have been inconclusive, but in future bone manure will be prepared at the farms, the price of the meal being higher than ordinary agriculturists can afford. The question will then be how bones compare in cost and as a fertilizer with the oil-cake and other manures in common use.

*D.—Takávi Advances.*

| Division. | 1889-90. | | | 1890-91. | | |
|---|---|---|---|---|---|---|
| | Act XIX of 1883. | Act XII of 1884. | Total. | Act XIX of 1883. | Act XII of 1884. | Total. |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Sind ... ... | 12,095 | 32,438 | 44,533 | 12,350 | 49,595 | 61,945 |
| Gujarát ... ... | 11,135 | 615 | 11,750 | 7,775 | 6,922 | 14,697 |
| Deccan ... .. | 11,255 | 13,940 | 25,195 | 17,730 | 13,646 | 31,376 |
| Karnátak ... ... | 41,305 | 800 | 42,105 | 1,33,445 | 175 | 1,33,620 |
| Konkan ... ... | 600 | 50 | 650 | 4,200 | 253 | 4,453 |
| Total ... | 76,390 | 47,843 | 1,24,233 | 1,75,500 | 70,591 | 2,46,091 |

43. The total advances are nearly double those of the previous year, and the increase is observable notably in the Karnátak, where the rise is 217 per cent. In the Konkan the increase is still higher, but the total amount is comparatively insignificant and is almost wholly confined to one district—Kánara. In Sind more than ⅘ths of the advances are for the purchase of seed and cattle.

Although some of the district reports explain the absence of applications for Takávi by the fact that the cultivators are well-to-do, there are many other causes at work. In Bijápur, one of the poorest districts, the advances have fallen off, while in Belgaum and Dhárwár enormous strides have been made, much of the money going for such operations as the clearing of prickly-pear and the eradication of deep-rooted grasses. Many reasons for this difference suggest themselves, but none can be stated with any certainty, till an equal effort at popularization has been made in all the districts. In Belgaum, no increase would have occurred but for the vigorous initiation of the Collector. He reports that there is reason to believe that one result of the extension of Takávi has been that the Sowkars "have materially lowered their exorbitant rates of interest."

In the Konkan there seems to be little prospect of extending loans. Thána and Kolába, Mr. Sinclair thinks, are in the hands of capitalists and other persons to whom advances would be useless, and, in the opinion of Mr. Cumine, the tenures of Ratnágiri are against this system. In Kánara the Collector effected a considerable increase in the amount taken up, and here and throughout the Karnátak and Deccan the extension may be expected to continue. Poona took no advances this year.

In Gujarát several districts have made sudden demands. The increase here also is probably due to more complete publication assisted by the simplified rules.

*E.—Locust attacks of the year.*

44. Large flights of locusts appeared in November—December, and traversed various parts of Gujarát and Káthiáwár. Some penetrated from North-West India across the Central Provinces and passed over portions of Khándesh, Násik, Ahmednagar, Poona, Sholápur, Bijápur, Kolhápur and Dhárwár; and a few crossed over to Kolába, Ratnágiri and Kánara in the Konkan. The flights passed rapidly from place to place, so that the total damage was spread over too wide an area to be much felt in any one district. All these belonged to the species *Acridium Peregrinum*. The locusts again appeared in May—June in parts of Khándesh, Gujarát, Káthiáwár and Ratnágiri, feeding on leaves mainly, as there was scarcely any cultivation at this time. In Sind they infested Karáchi, Thar and Párkar and Frontier Districts, lingering longest in the last district.

The specimens of locusts received from the District Officers were as last year forwarded to the Indian Museum for identification. This has resulted in the detection of a new locust enemy in the shape of a parasite. The specimen from Pálitána (Káthiáwár) was on dissection found to contain two grubs of a dipterous insect lodged in the cavity and muscles of the thorax. The grubs found were so large and were lodged so deep in the tissues that they would certainly have killed the insect. Similar grubs were found in specimens sent from the Upper Sind Frontier. Every locust afflicted with this parasite must necessarily die, and as the latter reproduces itself with extraordinary rapidity, Mr. Cotes hopes that "it will prove a valuable ally in reducing the number of locusts." As to the probable history of the grub, he writes—"The large winged fly, which is the mature form of the grub, lays an egg on the back of the locust; out of this egg hatches a minute grub, which bores its way into the tissues and gradually grows at the expense of the locust until it gets to the size of a big grain of boiled rice; it then cuts its way out of the locust, which would by this time probably have fallen to the ground from exhaustion and buries itself in the ground where it transforms into a compact brown pupa, from which the fly shortly emerges ready to copulate, and in the case of the female to lay eggs of its own."

In August last specimens of grasshoppers described as destroying young shoots of the Kharíf crops on the Upper Sind Frontier were sent to the Indian Museum. They were identified with Epacromia Dorsalis. Little is known about these insects. They may be of local origin and would not probably do any serious damage.

*F.—Improved Agricultural Implements.*

45. The "Planet Jr." hoes mentioned in last year's report (para. 37) have been useful in the Government farms and at Nadiád, but cultivators have not

taken them up; as with most European implements, they cannot compete in cost with the rayats' tools, which for ordinary cultivation are fully useful.

An American grass mower and a rake, both worked by bullock power, were tried on the Bhadgaon Farm with the result of a saving of Rs. 1-13-0 per ton of grass cut and raked. The average working capacity of these implements is six tons of grass cut and raked per day. The mower works perfectly on ground of a very uneven character.

The price of these implements is Rs. 350 for the mower and Rs. 190 for the rake. They are both excellent machines for use by army departments or wherever hay or fodder is cut in large quantities. I saw the machines worked on very rough grass land for the Commissariat Contractor at Poona. He has purchased a number of the machines and their use will probably extend wherever labour is not cheap.

### *G.—Trade in Wheat.*

46. Appendix B shows the exports of wheat from the ports of Bombay and Karáchi since 1880. The exports from Bombay began to fall in 1887 and reached in 1890 their lowest term since 1881. The highest limit was reached in 1886, mainly in consequence of the failure of the Russian harvests. Judged by the exports during the eight months ending August last this year's exports, from a similar cause, are expected to beat the record of 1886. The partial failure of wheat and rye crops in Europe has also created an unusually heavy demand for Indian wheat. High prices, a falling exchange, and the holding off of rain for a time considerably beyond the usual date, thus facilitating transport, have all been in favour of the wheat trade. The receipts by rail into the port of Bombay during the quarter ending 30th June 1891 (the chief period of shipment) nearly trebled those for the corresponding period of the previous year. This rise has taken place in spite of an unfavourable season both in the Presidency and in Berár. The exports from Karáchi have been rising since their abnormal fall in 1887 and this year's figures will as in Bombay exceed those of any previous year. The estimated outturns of Sind and the Panjáb, which contribute the whole of these exports, show no corresponding increase. It is therefore clear that an abnormal demand has drained the country of large quantities of wheat which would in ordinary circumstances have been used for local consumption.

### *H.—Cotton.*

47. The important discussion on the adulteration and deterioration of Indian cottons raised by Mr. James and the opinions of mercantile bodies on the legislation suggested cannot be dealt with here in detail. Generally the trade has been adverse to interference in the shape of a revival of legislation against undeclared mixture of staples, and the policy of attempting to force the higher grades of cotton upon the grower has not met with favour. The Indian growths, good, bad and indifferent, have been fairly ousted from the Liverpool market by the increasing competition of continental mills, backed with the advantage of cheap labour; a result further precipitated by the cheapness and enormous output of American cotton. It is more than doubtful whether any legislation could hinder a change due to causes of this nature, especially when it is borne in mind that the best of Indian fine cottons cannot compete on their merits with fair American, while they yield a smaller quantitative return per acre. As regards the results to the Bombay cotton grower, no harm has accrued. His market has changed place, but is larger than ever. The Bombay and Sind acreage under cotton stands thus :—

| | | | | |
|---|---|---|---|---|
| 1888-89 | ... | ... | 5,382,776 | The highest previously attained |
| 1889-90 | ... | ... | 58,20,902 | area since 1874-75 being in |
| 1890-91 | ... | ... | 5,923,639 | 1882-83, *viz.*, acres 5,698,862. |

The figures for Berár are still more significant. In 1890-91 the highest area on record was attained.

The exports of the Bombay Presidency and Sind show a steady progress (excluding the abnormal trade of 1881 to 1883) allowing for ordinary fluctuations.

(Indian maunds of $82\frac{2}{7}$ lbs.)

| Year. | Bombay Presidency (proper). | Province of Sind. |
|---|---|---|
| 1880-81 ... ... ... | 4,383,197 | 142,879 |
| 1881-82 ... ... ... | 6,034,033 | 179,354 |
| 1882-83 ... ... ... | 6,664,551 | 136,566 |
| 1883-84 ... ... ... | 6,208,891 | 94,943 |
| 1884-85 ... ... ... | 5,532,384 | 97,537 |
| 1885-86 ... ... ... | 4,437,817 | 169,564 |
| 1886-87 ... ... ... | 5,332,737 | 203,392 |
| 1887-88 ... ... ... | 5,348,562 | 178,489 |
| 1888-89 ... ... ... | 5,714,301 | 177,463 |
| 1889-90 ... ... ... | 6,559,220 | 196,685 |
| 1890-91 ... ... ... | 6,209,948 | 164,456 |

The demand therefore for the coarse Indian cottons, following economic changes on the Continent, is steady and increasing, and their gradual encroachment upon the finer but less profuse staples seems to be natural and inevitable so long as these conditions persist.

In August Dr. Watt and Mr. E. Thurston met Dr. T. Cooke and myself in conference at Poona, to discuss the destructive hybridization to which cotton is peculiarly subject and the means of dealing with it. Dr. Watt is of opinion that no cotton in India is botanically a pure species and his object is by culture to reach a form which may be as far as possible stable. As a first step a census of existing forms of Bombay cotton is being made to form a definite basis of comparison, while experiments have been arranged for at the Poona Farm with the object of ascertaining the botanical affinities of the trade staples, and if possible, obtaining a cotton plant of indigenous stock of a staple comparable to that of exotic varieties, while resisting the tendency of those varieties to degenerate by hybridization.

At this conference the nature of cotton and silk collections to be made through this Department for the Imperial Institute was discussed and settled.

*I.—Cotton Saw-gins at Dhárwár.*

48. One steam roller-gin has been added to the 15 steam-gins existing last year. It may be noted that the Kumpta cotton is steadily encroaching on the exotic variety in this district, for which the saw-gins were introduced. A few small steam-ginning factories have stopped work owing to the expense of employing certificated Engineers now required under the Steam Boilers Inspection Act; hand-gins to some extent taking their place. The Government Factory for repairing saw-gins continued to work during the year under report.

*J.—Forecasts.*

49. As noted last year forecasts for the important oilseeds.—Sesame, linseed and rapeseed—have been added to those on cotton and wheat. The following statement summarises the results as given in the final reports :—

*(Figures in thousands.)*

| Crop. | Average. | | | 1889-90. | | | 1890-91. | | | Estimated outturn. 1890-91. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | British Districts. | Native States. | Total. | British Districts. | Native States. | Total. | British Districts. | Native States. | Total. | British Districts. | Native States. |
| | | | | | | | | | | Bales. | Bales. |
| Cotton ... ... ... | 2,738 | 2,724 | 5,462 | 2,919 | 2,902 | 5,821 | 3,123 | 2,769 | 5,892 | 465<br>**59·5** | 636<br>**91·8** |
| | | | | | | | | | | Tons. | Tons. |
| Wheat ... ... ... | 2,346 | 596 | 2,942 | 2,360 | 554 | 2,914 | 2,329 | 513 | 2,842 | 594<br>**571·3** | 156<br>**681·2** |
| | | | | | | | | | | Cwt. | Cwt. |
| Sesame ... ... ... | 464 | ... | 464 | 424 | ... | 424 | 334 | 275 | 609 | 714<br>**239·3** | 695<br>**283·1** |
| Linseed ... ... ... | 309 | ... | 309 | 174 | ... | 174 | 193 | 24 | 217 | 390<br>**226·3** | 27<br>**126·0** |
| Rapeseed ... ... ... | 141 | ... | 141 | 244 | ... | 244 | 253 | 54 | 307 | 644<br>**285·1** | 211<br>**437·5** |

*Note.*—Figures in black type give acre rate in pounds.

The forecasts of area again correspond closely with the Agricultural Returns of actuals, viz. :—

| Crop. | Area as returned in | | Percentage difference. |
|---|---|---|---|
| | Forecast Returns. | Agricultural Returns. | |
| Cotton ... ... ... ... | 3,123,415 | 3,157,694 | —1·09 |
| Wheat ... ... ... ... | 2,328,934 | 2,318,578 | +0·45 |

The oilseeds, being a new departure, are out by 8 and 7 per cent respectively, but these are largely grown as row crops and are difficult to estimate. Rapeseed is a Sind crop only, and the information received proved to be greatly inaccurate, vitiating the forecast altogether.

The outturn is of course only an approximate estimate.

*K.—Agricultural Shows and Exhibitions.*

50. The shows subsidised by Government were :—

| No. | Province. | Place. | Kind of Show. | Date. | Prize Money. | Contributions. |
|---|---|---|---|---|---|---|
| | | | | | Rs. | |
| 1 | Deccan ... ... | Poona ... | Horse show ... | 3rd October 1890. | 3,200 | Government grant Rs. 3,000; District Local Board Rs. 500; subscriptions Rs. 770. |
| 2 | Káthiáwár ... | Rájkot ... | Horse show ... | 20th November 1890. | 1,983 and 38 diplomas. | Government grant Rs. 600; Káthiáwár Chiefs Rs. 5,250. |
| 3 | Deccan ... ... | Ahmadnagar... | Horse and cattle show and Agricultural Exhibition. | 30th December 1890. | 1,146 | Government grant Rs. 600; District Local Board Rs. 300. |
| 4 | Sind ... ... | Jacobabad ... | Sind Horse show | 12th January 1891. | 4,325 | Government grant Rs. 2,000; Shikárpur Local Board Rs. 2,500; Upper Sind Local Board Rs. 1,200. |
| 5 | Gujarát ... ... | Ahmadabad ... | Horse show ... | 9th March 1891 | 2,575 | Government grant Rs. 2,000; His Highness the Gáekwár Rs. 1,000; Ahmadabad Local Board Rs. 1,000; Native Chiefs Rs. 500. |

*Poona Horse Show.*—There was an increase of 70 over the exhibits (233) of last year, due probably to a favourable season and an increase in the value of prizes offered. But the quality of the exhibits was poor. The broodmare class alone showed some fine animals, while the only other classes, which the judges could pronounce to be good or fair were the yearlings and 3-year-old fillies. The Committee pointed out in connection with this show that the purchase by Remount Officers of mares and fillies was opposed to the interests of Horse-breeding; but on reference to the Military Department of Government it has not been found possible to impose the desired restriction.

*Rájkot Horse Show.*—The total number of exhibits was 1,190 as compared with 610 of the previous year and 355 of 1888. Most of these (925) were contributed by the Hálár Pránt and the rest by other Káthiáwár States; 900 were the property of Girásias and other *bonâ fide* cultivators and the rest mainly of the several Darbárs. His Excellency the Governor was present. 27 horses changed hands in all as compared with 16 in the previous year. No army remounts are yet obtainable in Káthiáwár. 26 entries were shown in the remount class, of which 3 were purchased for police.

The broodmares were very good, especially those belonging to the Native Chiefs, and the yearling stock was good. The two-year colt and filly class was good, but the 3-or 4-year-olds were inferior.

Rs. 1983 were given in prizes including silver medals. The principal prize winners among the States were Bhavnagar, Morvi and Gondal, and many of the

money prizes went to Girássias of Morvi, Nagar and Vánkáner. The quality of stock at the Show remains very low and much unsoundness is exhibited. It would be of great advantage if some of the Chiefs would introduce Veterinary establishments in this part of the country.

*Ahmadnagar Horse and Cattle and Agricultural Show*:—Being held after an interval of 3 years, the Show was less successful than that held in November 1887. The rains also having held off during the earlier part of the season, the Show had to be postponed till the end of December when agricultural operations were in full progress and exhibitors could with difficulty attend. The number of exhibits in all branches of the Show was much less than on previous occasions. It has therefore been resolved that the Show should be held in future years not later than October or November.

The total number of horse exhibits was 160 as compared with 288 in 1887. The quality of the animals exhibited was good, the classes for young stock, especially three-year-old fillies being noticeable. 12 animals were purchased for remount purposes. In the opinion of the Army Remount Agent, the result of the Show has been satisfactory. The Show was not restricted as previously to animals from the Ahmadnagar District and 39 exhibits were admitted from the neighbouring tálukas of Poona.

The Cattle and Agricultural Show was poor. There was a falling off of 176 entries as compared with 1887. Rs. 160 were awarded as prizes to 16 animals, but none of them appear to have belonged to *bonâ fide* cultivators, which robs this branch of the Show of much of its interest.

The Agricultural Exhibition also was not a success, the specimens of grain, seeds, vegetables and fruit being with few exceptions of an indifferent character. Rs. 192 were awarded in prizes (71 in all) for grain and seed exhibits. Fruit and vegetables were of an ordinary description. Rs. 65 were spent in prizes for miscellaneous products viz., sugar-cane, molasses, tobacco, fibres, lucerne and guinea-grass. The total spent in prizes was Rs. 1,146.

*Sind Horse Show*—Held this year at Jacobabad. In all, the number of animals brought up was 1,404 as compared with 1,038 produced at the Shikárpur Show in the previous year and no fewer than 1,369 animals were classified and registered. This marked increase was accompanied by a general improvement in quality. The following statement shows the extent to which the various districts were represented:—

| | |
|---|---|
| Upper Sind Frontier ... ... ... | 750 |
| Beluchistán ... ... ... | 433 |
| Shikárpur ... ... ... ... | 141 |
| Native States ... ... ... | 45 |
| | 1,369 |

The distinctive feature of the Show was, as usual, the large number of mares exhibited by Beluchis and Sind Jamindárs. The pony and mule classes were also well filled.

In the class for remounts (178 against 95 last year) there was a satisfactory increase in the number of exhibits, which are described by the judges as 'fairly good' but somewhat 'small'. 57 were purchased by the Army Remount Agent. In all, 147 horses at a cost of Rs. 31,623 were purchased by the representatives of the various Government Departments.

Rs. 4,325 were given away in prizes, nearly one-half of which was carried off by breeders from Beluchistán, although their exhibits numbered less than one-third of the total.

126 animals were branded at the Show by the Superintendent, Horse Breeding Department, Bombay.

Mule-breeding continues to make fair progress. 85 animals of different ages were exhibited and 8 prizes were given. This industry only requires attention on the part of army purchasers to develop considerably. The Show was altogether most successful.

*Ahmadabad Horse Show.*—The show was an improvement on that of the last year as regards both number and quality of the exhibits, which were mostly the property of cultivators and *bonâ fide* breeders.

The total number of exhibits was 703 as compared with 637 in 1890. The marginal table shows the number of exhibits sent by each district and the amount of prizes awarded. The remount class (62) was a fairly good one and twice as large as that (31) of 1890, and most of them found purchasers. The classes for ponies and broodmares were well represented, but the young stock was mostly poor. Very few geldings and poor were exhibited, but with a view to encourage castration not only were all the advertised prizes awarded, but several extra prizes were given to owners who allowed their animals to be gelt on the spot. 114 prizes amounting to Rs. 2,575 were awarded and about Rs. 1,205 were withheld by the judges.

| District or State. | Animals | Prize Money. |
|---|---|---|
| Ahmadabad ... | 279 | 1,465 |
| Kaira ... ... | 85 | 445 |
| Baroda ... ... | 172 | 290 |
| Mahi Kántha ... | 54 | 195 |
| Other places ... | 113 | 140 |
| Given to geldings by way of encouragement ... | ... | 40 |
| | 703 | 2,575 |

*Chinchli.*—There was no show during the year.

*Mahábaleshvar Horticultural Exhibition.*—This show was held at the Reay Gardens on the 1st May under the patronage of His Excellency the Governor. The total cost of the exhibition was Rs. 910, of which Rs. 563 were realized by subscriptions and sale of tickets, and the balance was derived from the savings of the last exhibition held in 1881. The exhibits, which were restricted to an area of 20 miles round Mahábaleshvar, were divided into four classes—flower, fruit, vegetable, and miscellaneous. The vegetable class included the produce of imported seed from English seedsmen, Simla and Lucknow. In the miscellaneous class were exhibited samples of jam, Mahábaleshvar and Panchgani coffee, Mahábaleshvar arrowroot, honey in combs, bees-wax and flowers. This exhibition should produce good results.

## VI.—HORSE AND CATTLE-BREEDING AND VETERINARY ESTABLISHMENT.

### *Civil Veterinary Department.*

51. The Department has been organized as regards the establishment of Veterinary Dispensaries in 12 districts under subsidy of Government, and the relations of the Superintendent, Horse-breeding Operations, to the Department of Land Records and Agriculture have been defined. The Veterinary Dispensaries are to be in charge of graduates of the Bombay Veterinary College, employed as servants of the District Local Board, on salaries of Rs. 50—100. Their duties have been prescribed, and in addition to ordinary hospital work comprise—

(*a*) the superintendence of Government Stallions.

(*b*) castration.

(*c*) attendance at shows.

(*d*) repression of epidemic disease in the district.

Provision has been made for the addition, wherever possible, of a travelling graduate, towards whose pay a further contribution is made by Government. This step is of great importance, as it is impossible for officers in charge of dispensaries to attend to epidemics in their districts or to visit the villages without detriment to hospital work. Through these officers much improvement in the treatment of stock should result; they will encourage owners to send difficult cases to the hospital; and they are to report the existence of epidemic disease for the Imperial Bacteriologist.

Under Government Resolution No. 8083-A of 15th November 1890, a Conference was held at Poona under the presidency of Sir E. Buck, at which Mr. Hallen, Mr. Ozanne, Dr. T. Cooke, Major Humfrey, Mr. Steel and Mr. Grainger were present. Dr. Lingard and Mr. Cooper, A.V.D., attended. At this Conference the conduct of the Bacteriological Laboratory and of Veterinary and Horse-Breeding Operations as concerned with Imperial interests formed the subjects of discussion. As regards horse-breeding a number of questions were raised, the chief of which have been the subject of separate consideration by Government.

The Annual Report of the Horse-Breeding Department was reviewed by this Department for the first time.

The number of stallions has increased by one, being now 104. The average annual cost is 5½ per cent. below that of last year though still heavy (Rs. 343-5-5). The average of mares covered (3,270 in all) was 37·5 per stallion. The produce return is unreliable.

The number of mares branded was 1,046, a decrease on the previous year. Remounts to the number of 572 were purchased, also a decrease from last year (643).

Mule-breeding has made considerable progress in Sind, but none in the Presidency Proper.

Subjects which have been brought prominently forward are the under-working of the Government stallions and the inefficiency of the existing branding system to provide the work wanting. Attention has also been drawn to the want of exercise, which interferes with the competence of the stallions and probably is the cause of a somewhat heavy list of casualties. Castration makes little progress.

*Veterinary Dispensaries.*

52. Excluding the Poona Dispensary attached to the College of Science (which has since been made a District Dispensary), there were four dispensaries in working order. The other districts are for the most part prepared to take advantage of the liberal concessions of Government, and progress will be reported next year.

| | |
|---|---|
| Ahmadabad. | Dhulia. |
| Nadiád. | Násik. |

The Principal of the Bombay Veterinary College, who has reviewed the reports of the four dispensaries, is on the whole satisfied with the results. Itinerating graduates are the chief need. During the year under report the hospitals were not receiving the full support of Government now granted, and for want of funds not much advance could be made. The Local Fund grants will, in most cases, bear an increase and the levy of small fees may afford some assistance. Meanwhile, the people show themselves ready to accept the Veterinary assistance offered. In the 4 dispensaries 2,503 animals were treated out of which 51 per cent. were cured, 19 per cent. relieved, 3 per cent. died, 3 per cent. were returned incurable, 22 per cent. appear as results unknown and 2 per cent. remained under treatment. An unduly large number of cases returned as "results unknown" points to one of the chief difficulties met with viz., that, failing immediate and miraculous cure, rayats are apt to take their animals away prematurely. I attach brief notes on each dispensary.

*Ahmadabad.*—An average of 4 in-patients and 19 out-patients daily. The Collector has taken steps for the increase of the contributions from the Pinjrapol, Municipal and Local Fund. Mr. Bhatt did good work, but could not leave his dispensary to see to cases of foot and mouth disease which appeared in the district. A travelling Veterinarian is much required in this district. Receipts Rs. 1,116, expenditure Rs. 1,109.

*Nadiád.*—Rinderpest and foot and mouth disease appeared in the district and the Veterinary graduate spent 3 months travelling, greatly to the damage of the hospital work. A travelling assistant has since been appointed and the dispensary results may be expected to improve rapidly. 675 animals were treated in the hospital (of which 20 per cent. were from outside) and 196 in the villages. Receipts Rs. 1,393, expenditure Rs. 1178. No in-door accommodation.

*Dhulia.*—Average attendance of out-patients 10. In-door accommodation deficient. Rinderpest was severe in parts of the district, but not much could be done owing to the absence of a second Veterinary Officer. An outbreak of sheep-pox was taken in hand by Mr. Mehta, Superintendent of the Bhadgaon Farm. Receipts Rs. 1,300, expenditure Rs. 1,219.

*Násik.*—This dispensary receives its chief income from the Society for Prevention of Cruelty to Animals. The hospital has been well managed and no less than 129 in-door patients were treated and about the same number of out-patients; the daily average attendance being 13·5. Some attendance at private stables was given at a low fee and publicity was given to the uses of the hospital by the distribution of printed handbills in outlying villages. The institution owes much to Miss Harvey of the Zanana Mission, who takes a lively interest in its welfare. Eight prosecutions were undertaken under the Prevention of Cruelty to Animals Act. Receipts Rs. 1,600, expenditure Rs. 1,163.

*Cattle Disease.*

53. The year was tolerably healthy, severe attacks of disease (Rinderpest in both cases) occurring only in Surat and Khándesh. In Surat the Collector deputed a Veterinarian to visit the affected tracts. There is no doubt that at present the great bulk of disease among farm stock remains unreported. The Collector of Surat remarks that "the rayat has so long been accustomed to look on cattle disease as a visitation of God, for which there is no help that he has not yet got into the habit of complaining about it." There was a great deal of mortality in Poona, especially among young stock, but it was not attributable to any known epidemic disease.

*Bacteriological Laboratory.*

54. The Conference recommendations under this head laid down the lines on which this institution should be worked. It should investigate diseases of domesticated animals in all parts of India by biological research both in the Laboratory and at the place of outbreak and work out remedial measures. As a first step to this end the conduct of a regular survey, province by province, of such diseases to be undertaken by an officer to be entitled the Superintendent of Bacteriological Survey. Dr. Lingard's title to be, for purposes of official correspondence, Imperial Bacteriologist. A resident Clinical Assistant to be attached, with hospital duties, and as Instructor to students in the Agricultural branch of the College of Science. Detailed recommendations were also made as to the equipment of the Laboratory and the distinctive duties of each office.

Dr. Lingard has been engaged during the year in continuing his investigation into the Intimate Etiology of 'Surra.'

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

### A.—AGRICULTURAL.

55. The revised forms prescribed by the Government of India for returns of Agricultural Statistics were circulated under Government Resolution No. 5802, Revenue Department, dated 25th August 1891. These do not affect, as far as the Bombay Presidency is concerned, the general instructions prescribed in the Revenue Manual as regards the registration and compilation of Agricultural Returns by District Officers; some special points in the compilation of agricultural stock and price returns will require notice, but the orders were issued too late to have effect this year. The returns for the Government of India will, however, be compiled in the Director's office in the revised forms as far as possible.

The District Agricultural Returns, which were due in this office under the Manual on 1st September, were in many cases received late and were especially late for the districts noted in the margin. With the aid of the inspecting staff now being organized, punctual compilation of the Táluka and District Agricultural Returns should easily be secured. Circle Inspectors are required to compile Táluka Agricultural Returns; and the District Returns are compiled and reviewed for the Collector by the District Inspector.

| District. | Date of receipt. |
|---|---|
| Ratnágiri ... ... | 3rd October. |
| Khándesh ... ... | 5th do. |
| Broach ... ... | 8th do. |
| Thána ... ... | 21st do. |
| Poona ... ... | 23rd do. |

In the District Returns one great change effected during the year is the exclusion of statistics for a large number of khoti and alienated villages in the Ratnágiri District, the figures formerly reported being found to be untrustworthy. The Collector, Mr. Cumine, on a reference from this office, wrote :—

> "No means exists in this Collectorate for obtaining correct figures; and until such means is created, it seems to me that no good can result from requiring from us year after year figures that are notoriously mere guess work."

For Sind the returns received are more complete than formerly, the supplementary statements as to anna valuation of outturn and as to number of fruit trees being now furnished for the first time (*vide* paras. 67 and 68 below).

**Return No. I.—Area of Available Statistics.**

56. The following table shows the variations in the total number of villages and gross area of the Presidency Proper and Sind, distinguishing area and villages for which Agricultural Statistics are available and are not available :—

*Area details.*

| Province. | Gross area and villages. | | | Area and villages of statistics available. | | | Area and villages of statistics not available. | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1889-90. | 1890-91. | Variation. | 1889-90. | 1890-91. | Variation. | 1889-90. | 1890-91. | Variation. |
| *A.—Presidency Proper.* | | | | | | | | | |
| Number of villages ... | 22,981 | 22,981 | ... | 21,334½ | 20,608½ | —726 | 1,646½ | 2,372½ | +726 |
| Area (thousand acres) ... | 47,542 | 47,546 | +4 | 45,168 | 43,851 | —1,317 | 2,374 | 3,695 | +1,321 |
| *B.—Sind.* | | | | | | | | | |
| Number of villages ... | 3,835 | 4,107 | +272 | 3,674 | 3,982 | +308 | 161 | 125 | —36 |
| Area (thousand acres) ... | 26,091 | 28,407 | +2,316 | 24,247 | 24,421 | +174 | 1,844 | 3,986 | +2,142 |
| *Total Presidency (A + B).* | | | | | | | | | |
| Number of villages ... | 26,816 | 27,088 | +272 | 25,008½ | 24,590½ | —418 | 1,807½ | 2,497½ | +690 |
| Area (thousand acres) ... | 73,633 | 75,953 | +2,320 | 69,415 | 68,272 | —1,143 | 4,218 | 7,681 | +3,463 |

57. Gross Area.—In the Presidency Proper, the gross area shows a net increase of 4,000 acres, the chief variations being in the districts noted in the margin, and attributable to the progress of survey. The total number of villages shows no variation, but 21 alienated villages in Belgaum and 1 in Sátára were transferred to the head "Government villages."

| | *Acres.* |
|---|---|
| Khándesh... ... ... | —6,000 |
| Násik ... ... ... | +1,100 |
| Ahmadnagar ... ... | - 1,200 |
| Poona ... ... ... | +8,000 |
| Sátára ... ... ... | +1,300 |
| Ratnágiri ... ... ... | —1,400 |
| Kánara ... ... ... | +2,400 |

In Sind both the gross area and number of villages are not yet determined and show large variations as noted in the margin. The variations in the number of villages are due partly to the splitting up of villages and partly to transfers. The sudden increase of area in Karáchi is due to the inclusion of unsurveyed villages, which were hitherto not returned. In other districts, the variations are chiefly attributed to progress of survey.

| District. | Villages. | Area. |
|---|---|---|
| | No. | Acres |
| Karáchi ... ... ... | +2 | +2,576,000 |
| Hyderabad ... ... ... | +50 | +75,500 |
| Shikárpur ... ... ... | —1 | +3,000 |
| Upper Sind Frontier ... | +1 | +3,500 |
| Thar and Párkar ... ... | +220 | —343,000 |

58. Area of available statistics.—In the Presidency Proper, there is a net decrease of 726 in villages and 13,17,000 acres in area as noted in the margin. The large decrease in Ratnágiri is due as explained above to the exclusion of statistics for khoti and alienated villages, which were merely guess work. In Bijápur, the decrease is due to the village record of an alienated village (Ankalgi) having been stolen in a dacoity. In Kánara, on completion of the original survey all the villages now furnish statistics. In other districts, the increase is due to the transfer of surveyed alienated villages from the head "not available." The variations in area are partly due to changes in the number of villages and partly to correction accompanying the progress of survey.

| | Villages. | Area. |
|---|---|---|
| | No. | Acres. |
| Ratnágiri ... ... ... | —812 | —1,412,000 |
| Kánara ... ... ... | + 81 | + 87,000 |
| Poona... ... ... ... | + 4 | +7,900 |
| Sátára ... ... ... | + 1 | +14,500 |
| Ahmadnagar ... ... | + 1 | —1,200 |
| Bijápur ... ... ... | — 1 | —7,400 |
| Khándesh ... ... ... | ... | —5,400 |
| Násik ... ... ... ... | ... | —600 |

In Sind, variations occur as noted in the margin, and are due partly to causes noted above under the gross area and partly to transfer of newly surveyed villages from the head "not available."

| | Villages. | Area. |
|---|---|---|
| | No. | Acres. |
| Karáchi ... ... | +36 | +435,000 |
| Hyderabad ... ... | +50 | +75,600 |
| Shikárpur ... ... | +1 | +2,600 |
| Upper Sind Frontier. | +1 | +3,900 |
| Thar and Párkar ... | +220 | —343,000 |

Non-reporting villages.—In the Presidency Proper 1,554½ Government villages with an area of 2,658,000 acres and 818 Alienated villages with an area of 1,037,000 acres do not return Agricultural Statistics. The Alienated villages are all unsurveyed, and the Government villages are under special tenures.

| | Non-reporting Government villages. |
|---|---|
| Kaira ... ... ... | 36 |
| Panch Mahále ... .. | 59 |
| Khándesh ... ... | 358½ |
| Násik ... ... ... | 12 |
| Thána ... ... ... | 14 |
| Kolába ... ... ... | 2 |
| Ratnágiri ... ... | 1,073 |

In Sind, statistics are returned for all but 125 villages, (120 Government and 5 Alienated) with an area of 3,985,000 acres as returned.

**Return No. II.—Cultivated and Uncultivated Area.**

59. The variations in areas under different sub-heads of cultivated and uncultivated land, are shown in the appended table. For comparison with last year, the variations exhibited in this return and the other returns are in this review shown for the Presidency Proper exclusive of Ratnágiri. For Ratnágiri and Sind no comparison can be made owing to sudden changes in areas of "available statistics" as noted in para. 58 above.

PRESIDENCY PROPER EXCLUSIVE OF RATNA'GIRI.

| Detail. | Area (thousand Acres). | | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|
| | 1889-90. | 1890-91. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| *A.—Cultivated Area.* | | | | | | |
| 1. Gross cropped ... ... | 25,199 | 25,458 | 259 | 1·02 | ... | ... |
| 2. Cropped more than once... | 545 | 540 | ... | ... | 5 | 0·91 |
| 3. Net area cropped... ... | 24,654 | 24,918 | 264 | 1·07 | ... | ... |
| 4. Fallow ... ... ... | 4,761 | 4,608 | ... | ... | 153 | 3·21 |
| Total cultivated 3+4. 5. Assessed ... | 29,335 | 29,443 | 108 | 0·36 | ... | ... |
| 6. Unassessed ... | 80 | 83 | 3 | 3·75 | ... | ... |
| 7. Total A. ... | 29,415 | 29,526 | 111 | 0·37 | ... | ... |
| *B.—Uncultivated Area.* | | | | | | |
| Available for cultivation. 8. Assessed ... | 1,467 | 1,323 | ... | ... | 144 | 9·81 |
| 9. Unassessed ... | 878 | 863 | ... | ... | 15 | 1·70 |
| Not available for cultivation. 10. Forest... ... | 6,361 | 6,678 | 317 | 4·98 | ... | ... |
| 11. Other than Forest ... | 5,262 | 5,088 | ... | ... | 174 | 3·30 |
| 12. Total B (uncultivated)... | 13,968 | 13,952 | ... | ... | 16 | 0·11 |
| 13. Total A+B=Area of available statistics ... | 43,383 | 43,478 | 95 | 0·21 | ... | ... |

60. The gross cropped area gives a net increase of 259,000 acres or 1·02 per cent., while the area cropped more than once shows a small decrease of 5,000 acres. The net cropped area has thus increased by 264,000 acres or 1·07 per cent. This increase is attributable to extended cultivation, (1) of fallow (153,000 acres or an increase of 3·21 per cent.), (2) of waste land newly occupied (108,000 or an increase of 0·36 per cent.) and (3) of land under temporary cultivation (3,000 or 3·75 per cent. increase). The principal variations in the District returns are noted in the margin.

Cultivated area.

| District. | Net cropped Area. | Current fallow. | Assessed cultivated *i.e.*, occupied land. |
|---|---|---|---|
| | Area in | thousand | acres. |
| Khándesh ... ... | +63 | −52 | +11 |
| Poona ... ... | +32 | −32 | ..... |
| Násik ... ... | +32 | −30½ | +1½ |
| Sholápur ... ... | +24 | −22 | +2 |
| Bijápur ... ... | +23 | −5 | +18 |
| Ahmadabad ... ... | +21 | −17 | +2 |
| Ahmadnagar ... ... | +21 | −15 | +6 |
| Sátára ... ... | +18 | −9 | +9 |
| Dhárwár ... ... | +12 | −10½ | +1½ |
| Panch Mahále ... ... | +9 | −19 | +28 |
| Surat ... ... | +6 | −6 | ..... |
| Kaira ... ... | +3 | −1½ | +1½ |
| Belgaum ... ... | −5 | +22 | +17 |
| Thána ... ... | −5 | +4 | −1 |

In net cropped area Belgaum and Thána alone show a small decrease of 5,000 acres each. In the Panch Mahále a considerable increase appears both under fallow and newly occupied land, which seems to indicate that more land is

being taken up than is actually put under cultivation. Only in Thána is there a small decrease of about 1,000 acres under total occupied land, which is not explained.

Uncultivated area.

61. There is a decrease of 144,000 acres or 9·81 per cent. under "assessed" land and of 15,000 acres or 1·70 under "unassessed" land "available for cultivation." This decrease occurs chiefly owing to waste land newly taken up for cultivation as noted above, and partly to transfer to forests as indicated below.

Forest.

| | Thousand Acres. |
|---|---|
| Kánara ... ... | +76 |
| Thána ... .. | +61 |
| Panch Mahále ... | +51 |
| Khándesh ... | +42 |
| Poona ... . | +40 |
| Belgaum... . | +27 |
| Kolába ... ... | +14 |

62. Land under forest has gained by 317,000 acres or 4·98 per cent., chiefly in the districts noted in the margin. In Kánara the increase is mainly nominal, being chiefly due to the inclusion of forest land of the 81 villages of the Siddápur Táluka, which returned statistics for the first time. Elsewhere, the increase is obtained by transfer principally of "uncultivable" land.

63. The usual percentage table summarizing the information contained in Returns Nos. I and II., is appended. In Kánara, the area of non-available statistics disappears altogether owing to the completion of the Survey operations; the increase of this item in Ratnágiri has been explained.

| No. | District. | Percentage on gross area, of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas: Cultivated. Actually cropped. | Cultivated. Current Fallows. | Uncultivated. Available for cultivation. | Uncultivated. Not available for cultivation. | Forest. |
|---|---|---|---|---|---|---|---|
| | A.—Presidency proper. | | | | | | |
| | I.—*Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 1·0 | 55 | 22 | 4 | 18 | 1 |
| 2 | Kaira ... ... | 8·5 | 75 | 5 | 8 | 12 | ... |
| 3 | Panch Mahále ... | 15·5 | 36 | 15 | 21 | 9 | 19 |
| 4 | Broach ... ... | 1·9 | 65 | 6 | 3 | 26 | ... |
| 5 | Surat ... ... | 2·4 | 47 | 24 | 7 | 18 | 4 |
| | Average ... | 4·8 | 56 | 16 | 7 | 17 | 4 |
| | II.—*Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 9·9 | 59 | 3 | 16 | 12 | 10 |
| 7 | Násik ... ... | 4·2 | 56 | 9 | 5 | 9 | 21 |
| 8 | Ahmadnagar ... | 2·5 | 67 | 8 | 3 | 9 | 13 |
| 9 | Poona ... ... | 1·2 | 63 | 10 | 1 | 13 | 13 |
| 10 | Sholápur ... ... | ... | 74 | 10 | 1 | 9 | 6 |
| 11 | Sátára ... ... | 3·7 | 61 | 13 | 1 | 10 | 15 |
| | Average ... | 4·3 | 63 | 8 | 6 | 10 | 13 |
| | III.—*Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 0·9 | 62 | 12 | 4 | 6 | 16 |
| 13 | Bijápur ... ... | 0·9 | 77 | 9 | 3 | 6 | 5 |
| 14 | Dhárwár ... ... | 2·5 | 72 | 9 | 2 | 7 | 10 |
| | Average ... | 1·5 | 71 | 10 | 3 | 6 | 10 |
| | IV.—*Konkan.* | | | | | | |
| 15 | Thána ... ... | 4·1 | 22 | 21 | 5 | 30 | 22 |
| 16 | Kolába ... ... | 2·4 | 31 | 23 | 4 | 22 | 20 |
| 17 | Ratnágiri ... ... | 85·1 | 31 | 36 | 1 | 30 | 2 |
| 18 | Kánara ... ... | ... | 10 | 3 | 2 | 8 | 77 |
| | Average ... | 26·0 | 19 | 15 | 4 | 20 | 42 |
| | Average A. ... | 7·9 | 57 | 11 | 5 | 12 | 15 |

| No. | District. | Percentage on gross area, of areas for which statistics are not available. | Precentage on net area for which statistics are available, of areas: Cultivated. Actually cropped. | Cultivated. Current Fallows. | Uncultivated. Available for cultivation. | Uncultivated. Not available for cultivation. | Forest. |
|---|---|---|---|---|---|---|---|
| | B.—Sind. | | | | | | |
| 19 | Karáchi ... ... | 29·7 | 8 | 8 | 19 | 63 | 2 |
| 20 | Hyderabad ... | ... | 15 | 24 | 40 | 19 | 2 |
| 21 | Shikárpur ... ... | 17·6 | 20 | 15 | 40 | 18 | 7 |
| 22 | Upper Sind Frontier ... | 48·8 | 20 | 43 | 18 | 13 | 6 |
| 23 | Thar and Párkar ... | ... | 7 | 9 | ... | 84 | ... |
| | Average B. ... | 14·0 | 12 | 14 | 21 | 50 | 3 |
| | Average for the Presidency ... | 10·1 | 41 | 12 | 11 | 25 | 11 |

**Return No. III.—Crops.**

64. The rainfall was again favourable for sowing, and more so than last year, the total area under crop having risen by 2½ lákhs or 1 per cent. Jowári, and gram among cereals and pulses, and cotton, oil-seeds and tobacco show a general increase; while bájri, paddy, wheat, tur and other cereals and pulses and sugarcane have generally decreased. Non-food crops have risen by 3 $\frac{3}{10}$ lákhs or 7·1 per cent., while food-crops have diminished by ¾ lákh or 0·3 per cent. The season was specially favourable for sowing cotton and rabi jowári.

*Table to show effect of season on area sown.*

Presidency proper excluding Ratna'giri.

| Crops. | Area, Thousand Acres. 1889-90. | Area, Thousand Acres. 1890-91. | Increase. Thousand Acres. | Increase. Per cent. | Decrease. Thousand Acres. | Decrease. Per cent. |
|---|---|---|---|---|---|---|
| Jowári ... ... ... | 7,698 | 8,322 | 624 | 8·1 | ... | ... |
| Bájri ... ... | 4,959 | 4,449 | ... | ... | 510 | 10·3 |
| Paddy ... ... | 1,568 | 1,555 | ... | ... | 13 | 0·8 |
| Wheat ... ... | 1,924 | 1,913 | ... | ... | 11 | 0·5 |
| Others ... ... | 1,695 | 1,694 | ... | ... | 1 | ... |
| Total Cereals ... | 17,844 | 17,933 | 89 | 0·5 | ... | ... |
| Tur ... ... | 601 | 524 | ... | ... | 77 | 12·8 |
| Gram ... ... | 691 | 704 | 13 | 1·9 | ... | ... |
| Others ... ... | 1,152 | 1,058 | ... | ... | 94 | 8·1 |
| Total Pulses ... | 2,444 | 2,286 | ... | .. | 158 | 6·5 |
| Tobacco ... ... | 70 | 96 | 26 | 37·1 | ... | ... |
| Sugarcane ... ... | 67 | 63 | ... | ... | 4 | 6·0 |
| Oil-seeds ... ... | 1,509 | 1,581 | 72 | 4·7 | ... | ... |
| Cotton ... ... | 2,816 | 3,052 | 201 | 7·0 | ... | ... |
| Food Crops Total ... | 20,520 | 20,447 | ... | ... | 73 | 0·3 |
| Non-food Crops Total ... | 4,679 | 5,011 | 332 | 7·1 | ... | ... |
| Total Crops ... | 25,199 | 25,458 | 259 | 1·0 | ... | ... |

**Jowari.**—Rabi jowári has increased by 11 lákhs acres, while *kharif* jowári decreased by $4\frac{3}{4}$ lákhs. This net increase of $6\frac{1}{4}$ lákhs or 8·1 per cent. is confined to the East Deccan and Karnátak, where early rain for *kharif* bájri was deficient, and the later rainfall specially favourable for *rabi* sowing. In Dhárwár jowári is principally a *kharif* crop and for this the rains were favourable producing the increase noted. In Broach the smaller area under *rabi* jowári is mainly due to the larger area devoted to cotton owing to favourable *kharif* rains.

| District. | Thousand Acres. | | |
|---|---|---|---|
| | Kharif. | Rabi. | Net variation. |
| Sholápur ... ... ... | ... | +290 | +290 |
| Ahmadnagar ... ... | ... | +222 | +222 |
| Bijápur ... ... ... | —207 | +417 | +210 |
| Sátára ... ... ... | —9 | +88 | +79 |
| Dhárwár ... ... ... | +36 | —12 | +24 |
| Khándesh ... ... ... | —48 | ... | —48 |
| Broach ... ... ... | — 2 | —35 | —37 |
| Ahmadabad ... ... | —35 | ... | —35 |
| Belgaum ... ... ... | —47 | +22 | —25 |
| Surat ... ... ... | —23 | ... | —23 |
| Poona ... ... ... | —12 | —2 | —14 |
| Násik ... ... ... | — 9 | —1 | —10 |
| Kaira ... ... ... | — 6 | ... | —6 |

**Bajri.**—The decrease of $5\frac{1}{10}$ lákhs or 10·3 per cent. is chiefly in the East Deccan and Karnátak where *kharif* rains for bájri sowing were deficient. The decrease in East Deccan and Karnátak is more than counterbalanced by the large increase in jowári above noted. In Khándesh the decrease noticeable under jowári and bájri is explained by the favourable cotton-sowing rain, which drew a large area under that crop.

| | Thousand Acres. |
|---|---|
| Ahmadnagar ... ... ... | —253 |
| Sholápur ... ... ... ... | —201 |
| Bijápur ... ... ... ... | —121 |
| Sátára ... ... ... ... | —44 |
| Khándesh ... ... ... | —16 |
| Poona ... ... ... ... | +67 |
| Belgaum ... ... ... ... | +24 |
| Kaira ... ... ... ... | +16 |
| Násik ... ... ... ... | +7 |
| Ahmadabad ... ... ... | +6 |

**Paddy.**—There is a net decrease of 13,000 acres or 0·8 per cent., considerable in Kaira where the heavy rain required for this crop was short for sowing.

| | Thousand Acres. |
|---|---|
| Kaira ... ... ... ... | —12 |
| Sholápur ... ... ... ... | —6 |
| Broach ... ... ... ... | —5 |
| Bijápur ... ... ... ... | —5 |
| Násik ... ... ... ... | +6 |
| Kanara ... ... ... ... | +3 |
| Khándesh ... ... ... | +2 |
| Poona ... ... ... ... | +2 |

**Wheat.**—Although the net decrease is only 11,000 acres or 0·5 per cent., the variations in the districts are considerable. Ahmadnagar increased by 46,000 acres or 19·32 per cent. The *kharif* rains being deficient for bájri sowing the land usually devoted to bájri was put, as explained in the last report, under wheat, the late rains favouring. Surat was specially favoured by a passing late shower and the variations in other districts are also seasonal fluctuations.

| | Thousand Acres. |
|---|---|
| Ahmadabad ... ... ... | —16 |
| Belgaum ... ... ... ... | —11 |
| Bijápur ... ... ... ... | —10 |
| Sátara ... ... ... ... | —10 |
| Khándesh ... ... ... | —8 |
| Poona ... ... ... ... | —8 |
| Panch Maháls ... ... ... | —8 |
| Sholáupr ... ... ... ... | —6 |
| Kaira ... ... ... ... | —5 |
| Ahmadnagar ... ... ... | +46 |
| Dhárwár.. ... ... ... | +10 |
| Surat ... ... ... ... | +8 |
| Násik ... ... ... ... | +8 |

**Other Cereals.**—The minor cereals show altogether a trifling decrease of 1,000 acres. Kodra, Vari and Ragi are grown more or less all over the Presidency and form a staple food of the lower classes in the Konkan, in districts bordering on the Sahyádris and in parts of Gujarát. Rála is practically confined to the Karnátak and South Deccan. Maize is a staple crop in the Panch Maháls taking the place of jowári and bájri in other districts. Its area in the Panch Maháls has risen by 5,000 acres or 5·74 per cent. Barley with a total area of 32,000 acres is chiefly grown in North Gujarát and South Deccan. The table exhibits variations of these, the chief of the minor cereals only.

| | Thousand Acres. |
|---|---|
| Kodra ... ... ... ... | —12 |
| Vari ... ... ... ... | —10 |
| Rála ... ... ... ... | +13 |
| Ragi ... ... ... ... | +3 |
| Maize ... ... ... ... | +5 |
| Barley ... ... ... ... | —4 |

**Pulses.**—There is a net decrease of $1\frac{1}{2}$ lákhs or 6·5 per cent. Nearly two-thirds of the pulses are sown in the *kharif* season and they therefore shared with bájri and *kharif* jowári the general decrease resulting from late rains. Gram shows a net increase of 13,000 acres or 1·9 per cent., chiefly in the Deccan (except Sátára) and in Bijápur.

| | Thousand Acres. |
|---|---|
| *Tur.* | |
| Bijápur ... ... ... ... | —49 |
| Sholápur ... ... ... ... | —31 |
| Ahmadnagar ... ... ... | —9 |
| Khándesh ... ... ... | +7 |
| Dhárwár ... ... ... ... | +6 |
| Poona ... ... ... ... | +5 |
| *Gram.* | |
| Násik ... ... ... ... | +12 |
| Bijápur ... ... ... | +8 |
| Ahmadnagar ... ... ... | +7 |
| Poona ... ... ... ... | +5 |
| Panch Maháls ... ... ... | —10 |
| Sátára ... ... ... ... | —9 |

| | Acres. |
|---|---|
| Ahmadnagar ... ... | +5,300 |
| Khándesh ... ... ... | +4,100 |
| Belgaum ... ... ... | +3,700 |
| Sátára ... ... ... | +3,400 |
| Kaira ... ... ... | +2,600 |
| Ahmadabad ... ... | +1,600 |
| Násik ... ... ... | +1,500 |
| Dhárwár ... ... ... | +1,000 |
| Bijápur ... ... | +800 |
| Sholápur ... ... ... | +700 |
| Poona ... ... ... | +600 |
| Broach ... ... ... | +500 |

**Tobacco.**—Last year the tobacco crop showed an increase of 21,000 acres. This year there is again an increase of 26,000 acres or 37·1 per cent. This is attributed partly to seasonable rainfall and partly to high prices attended by large profits.

| | Acres. |
|---|---|
| Dhárwár ... ... ... | —2,100 |
| Násik ... ... ... | —1,700 |
| Belgaum ... ... ... | —400 |
| Khándesh ... ... ... | —300 |
| Ahmadnagar ... ... | —200 |
| Poona ... ... ... | —200 |
| Sátára ... ... ... | +800 |
| Surat ... ... ... ... | +600 |
| Ahmadabad... ... ... | +300 |

**Sugarcane.**—There is again a small decrease of 3,500 acres or 6 per cent., which is general, except in three districts of Gujarát and in Sátára. The chief variations are noted in the margin. The decrease is specially large in Dhárwár and Násik and is attributed to deficiency of sowing rainfall. Owing to this continuous fall in the sugarcane area of the Presidency, local prices again rose considerably and imports of unrefined sugar (gul) for local supply were more than doubled, as noticed in the Rail-borne Trade Report.

**Oil-seeds.**—A net increase of $\frac{3}{4}$ lákh acres or 4·7 per cent. is observed under the principal heads. Of these sesame is grown all over the Presidency, while linseed, nigerseed, ground-nut and safflower are raised chiefly in the Deccan and Karnátak. Castor-oil-seed is largely grown in Gujarát and Karnátak and in Sholápur. Detailed notice as to variations is called for in the case of sesame and linseed.

| | Thousand Acres. |
|---|---|
| Sesame ... ... ... ... | —55 |
| Linseed ... ... ... ... | +35 |
| Castor ... ... ... ... | +12 |
| Safflower ... ... ... ... | +69 |
| Niger ... ... ... ... | +15 |
| Ground-nut ... ... ... | —3 |
| Others ... ... ... ... | —1 |

| | Thousand Acres. |
|---|---|
| Bijápur ... ... ... ... | —19 |
| Khándesh ... ... ... | —13 |
| Ahmadnagar ... ... ... | —9 |
| Sholápur ... ... ... ... | —7 |
| Belgaum ... ... ... ... | —4 |
| Násik ... ... ... ... | —3 |
| Ahmadabad ... ... ... | +3 |

**Sesame.**—The decrease of 55,000 acres or 20·20 per cent. is general except in Ahmadabad. It is specially noticeable in the Deccan and Karnátak, where rain was unfavourable for the *kharif* crops of which sesame is one for the most part in the Deccan and Karnátak.

| | Thousand Acres. |
|---|---|
| Bijápur ... ... ... ... | +22 |
| Sholápur ... ... ... | +7 |
| Ahmadnagar .. ... ... | +3 |
| Násik ... ... ... ... | +2 |
| Ahmadabad ... ... ... | +1 |

**Linseed.**—The increase of 35,000 acres or 20·23 per cent. is chiefly in the East Deccan and Karnátak, and in Ahmadabad in Gujarát as noted in the margin. Linseed is always a late crop and the increase in the Deccan and Karnátak followed on the favourable late rains.

| | Thousand Acres. |
|---|---|
| Khandesh ... ... ... | +135 |
| Ahmadabad ... ... ... | +55 |
| Broach ... ... ... ... | +53 |
| Násik ... ... ... ... | +18 |
| Surat ... ... ... ... | +14 |
| Dhárwár ... ... ... ... | —25 |
| Bijápur ... ... ... ... | —13 |
| Sholápur ... ... ... ... | —5 |

**Cotton.**—The increase of 2 lákhs or 7 per cent. chiefly occurs in Gujarát and North Deccan, where cotton is an early crop, partly owing to seasonable rainfall and partly to high prices and the good yield of the previous year. In the Karnátak Districts, where cotton is a late crop, though the late rains were favourable, the larger area appears to have been devoted to *rabi* jowári, probably under exigencies of rotation.

**Potato.**—The acreage further fell from 9,600 to 7,800 or 18·75 per cent. The decrease is chiefly in the Poona District, the area falling from 8,100 to 6,500 acres owing to prevalence of disease in the Khed and Junnar Tálukas. The action taken to check this blight has been detailed in paragraph 41 of this report.

**Green fodder.**—Lucerne shows an increase from 1,140 to 1,440 acres, the crop being chiefly cultivated in Ahmadnagar (560), Poona (350), Násik (270) and Thána (250). Hot weather jowári, which is the only cereal cultivated for fodder, shows a decrease (1,500 acres) from 17,500 to 16,000 acres.

65. **Kharif and Rabi crops.**—The details given in the appended table show variations under kharíf and rabi cereals and pulses :—

(*Figures in thousands.*)

| Year. | Kharíf. | | Rabi. | |
|---|---|---|---|---|
| | Cereals. | Pulses. | Cereals. | Pulses. |
| 1889-90 ... ... | 11,178 | 1,560 | 6,666 | 884 |
| 1890-91 ... ... | 10,373 | 1,394 | 7,559 | 892 |
| | —805 | —166 | +893 | +8 |

Owing to the unfavourable early rains in the Deccan and Karnátak the kharíf crops contrary to last year, show a large decrease and rabi crops a large increase.

66. The usual two returns showing the distribution of crops are appended. Statement A shows the distribution of the principal crops in each district including Sind. Statement B shows the proportion which the area under the several crops in each district holds with respect to the gross area in the Presidency Proper.

*A.—Distribution of Crops—Percentages shown on District Areas.*

| No. | District. | Food Crops. | | | | | | | | | Non-food crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Presidency Proper. | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 22 | 18 | 5 | 11 | 4 | 1 | 61 | 7 | 1 | 27 | 3 | 1 | 69 | 31 |
| 2 | Kaira ... ... ... ... | 8 | 31 | 14 | 2 | 24 | 1 | 80 | 11 | 1 | 2 | 2 | 4 | 92 | 8 |
| 3 | Panch Mahále ... ... ... | 1 | 12 | 14 | 2 | 16 | 26 | 71 | 18 | ... | ... | 9 | 2 | 89 | 11 |
| 4 | Broach ... ... ... ... | 15 | 4 | 3 | 9 | 1 | ... | 32 | 9 | 4 | 52 | 2 | 1 | 45 | 55 |
| 5 | Surat ... ... ... ... | 18 | 1 | 19 | 6 | 9 | ... | 53 | 16 | 2 | 20 | 8 | 1 | 71 | 29 |
| | Average ... | 16 | 15 | 9 | 7 | 9 | 4 | 60 | 11 | 1 | 22 | 4 | 2 | 72 | 28 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 17 | 24 | 1 | 7 | 1 | ... | 50 | 7 | ... | 38 | 4 | 1 | 57 | 43 |
| 7 | Násik ... ... ... ... | 7 | 39 | 3 | 17 | 10 | ... | 76 | 11 | 1 | 2 | 10 | ... | 88 | 12 |
| 8 | Ahmadnagar ... ... ... | 45 | 26 | ... | 10 | 2 | ... | 83 | 7 | ... | 2 | 7 | 1 | 90 | 10 |
| 9 | Poona ... ... ... ... | 40 | 29 | 3 | 5 | 5 | 1 | 83 | 8 | 1 | ... | 7 | 1 | 92 | 8 |
| 10 | Sholápur... ... ... ... | 70 | 5 | 1 | 2 | ... | 1 | 79 | 7 | ... | ... | 12 | 2 | 86 | 14 |
| 11 | Sátára ... ... ... ... | 32 | 29 | 2 | 3 | 8 | 1 | 75 | 16 | 1 | ... | 6 | 2 | 92 | 8 |
| | Average ... | 35 | 25 | 1 | 8 | 4 | ... | 73 | 9 | 1 | 9 | 7 | 1 | 83 | 17 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 42 | 8 | 6 | 7 | 9 | 1 | 73 | 11 | 1 | 8 | 4 | 3 | 85 | 15 |
| 13 | Bijápur ... ... ... ... | 55 | 8 | ... | 6 | 2 | ... | 71 | 7 | ... | 14 | 7 | 1 | 78 | 22 |
| 14 | Dhárwár ... ... ... | 30 | ... | 7 | 14 | 8 | ... | 59 | 10 | 1 | 23 | 4 | 3 | 70 | 30 |
| | Average .. | 43 | 6 | 4 | 9 | 6 | ... | 68 | 9 | ... | 15 | 6 | 2 | 77 | 23 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 63 | ... | 22 | ... | 85 | 8 | 2 | ... | 4 | 1 | 95 | 5 |
| 16 | Kolába ... ... ... ... | ... | ... | 57 | ... | 34 | ... | 91 | 6 | 1 | ... | 2 | ... | 98 | 2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 30 | ... | 55 | ... | 85 | 6 | 4 | ... | 4 | 1 | 95 | 5 |
| 18 | Kánara ... .. ... ... | 1 | ... | 78 | ... | 2 | ... | 81 | 2 | 11 | ... | ... | 6 | 94 | 6 |
| | Average ... | ... | ... | 61 | ... | 25 | ... | 86 | 6 | 3 | ... | 3 | 2 | 95 | 5 |
| | Average A ... | 33 | 17 | 6 | 7 | 6 | 1 | 70 | 9 | 1 | 12 | 6 | 2 | 80 | 20 |
| | *B.—Sind.* | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... | 16 | 6 | 37 | 9 | ... | 3 | 71 | 7 | 3 | ... | 11 | 8 | 81 | 19 |
| 20 | Hyderadad ... ... ... | 12 | 34 | 21 | 5 | ... | 1 | 73 | 3 | 3 | 8 | 11 | 2 | 79 | 21 |
| 21 | Shikárpur ... ... ... | 19 | 1 | 25 | 26 | ... | 1 | 72 | 11 | 1 | 1 | 14 | 1 | 84 | 16 |
| 22 | Upper Sind Frontier ... ... | 48 | 8 | 4 | 10 | ... | ... | 70 | 5 | 1 | ... | 24 | ... | 76 | 24 |
| 23 | Thar and Párkar ... ... | 1 | 69 | 14 | 5 | ... | ... | 89 | 1 | ... | 4 | 6 | ... | 90 | 10 |
| | Average B ... | 15 | 24 | 22 | 13 | ... | 1 | 75 | 6 | 2 | 3 | 12 | 2 | 83 | 17 |
| | Average for the Presidency ... | 31 | 18 | 8 | 8 | 5 | 1 | 71 | 9 | 1 | 11 | 7 | 1 | 81 | 19 |

*B.—Distribution of Crops—Percentages shown on Presidency Area.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 3·7 | 5·6 | 3·8 | 8·1 | 3·4 | 9·1 | 4·7 | 3·9 | 4·1 | 11·9 | 3·0 | 3·1 | 4·6 | 8·4 |
| 2 | Kaira ... ... ... ... | 0·7 | 5·0 | 6·6 | 0·6 | 11·2 | 3·9 | 3·2 | 3·7 | 3·0 | 0·4 | 0·9 | 7·6 | 3·2 | 1·1 |
| 3 | Panch Maháls ... ... ... | ... | 1·0 | 3·2 | 0·5 | 3 8 | 45·2 | 1·4 | 2·9 | 0·5 | ... | 2·0 | 1·9 | 1·6 | 0·8 |
| 4 | Broach ... ... ... | 1·1 | 0·4 | 0·9 | 2·8 | 0·4 | 0·2 | 1·0 | 2·3 | 11·0 | 10·2 | 0·9 | 1·2 | 1·3 | 6·6 |
| 5 | Surat ... ... ... | 1·2 | 0·2 | 6·5 | 1·6 | 3·0 | 0·3 | 1·7 | 3·9 | 3·4 | 3·5 | 3·0 | 1·5 | 1·9 | 3·2 |
| | Total ... | 6·7 | 12·2 | 21·0 | 13·6 | 21·8 | 58·7 | 12·0 | 16·7 | 22·0 | 26·0 | 9·8 | 15·3 | 12·6 | 20·1 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 6·3 | 15·9 | 1·7 | 11·0 | 1·8 | 2·4 | 8·3 | 8·4 | 4·3 | 37·6 | 7·4 | 11·0 | 8·3 | 26·0 |
| 7 | Násik ... ... ... | 1·6 | 18·0 | 3·4 | 18·2 | 13·2 | 2·3 | 8·6 | 9·3 | 7·2 | 1·1 | 12·6 | 3·2 | 8·7 | 4·9 |
| 8 | Ahmadnagar ... ... ... | 14·9 | 15·9 | 0·8 | 14·9 | 2·9 | 3·0 | 12·7 | 8·9 | 4·2 | 2·1 | 11·3 | 5·3 | 12·2 | 5·3 |
| 9 | Poona .. ... ... | 10·4 | 14·5 | 4·1 | 5·9 | 6·6 | 7·6 | 10·0 | 7·8 | 11·4 | ... | 9·9 | 4·7 | 9·8 | 3·5 |
| 10 | Sholápur ... ... ... | 18·3 | 2·6 | 1·0 | 2·9 | 0·2 | 11·5 | 9·6 | 6·1 | 4·2 | 0·1 | 16·9 | 7·8 | 9·1 | 6·0 |
| 11 | Sátára ... ... ... | 7·2 | 12·2 | 2·6 | 3·2 | 9·7 | 10·5 | 7·9 | 13·5 | 10·7 | 0·3 | 6·9 | 10·6 | 8·5 | 3·1 |
| | Total ... | 58·7 | 79·1 | 13·6 | 56·1 | 34·4 | 37·3 | 57·1 | 54·0 | 42·0 | 41·2 | 65·0 | 42·6 | 56·6 | 48·8 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... .. | 9·0 | 3·3 | 7·1 | 6·0 | 10·7 | 3·5 | 7·2 | 8·4 | 8·8 | 4·7 | 4·5 | 14·0 | 7·3 | 5·3 |
| 13 | Bijápur ... ... ... | 18·1 | 5·3 | 0·4 | 9·0 | 2·8 | 0·5 | 10·9 | 8·3 | 2·8 | 12·6 | 12·8 | 4·3 | 10·6 | 12·0 |
| 14 | Dhárwár ... ... ... | 7·5 | 0·1 | 9·7 | 15·3 | 10·4 | ... | 6·8 | 9·1 | 6·5 | 15·5 | 5·9 | 17·1 | 7·1 | 12·6 |
| | Total ... | 34·6 | 8·7 | 17·2 | 30·3 | 23·9 | 4·0 | 24·9 | 25·8 | 18·1 | 32·8 | 23·2 | 35·4 | 25·0 | 29·9 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... | ... | ... | 21·2 | ... | 7·6 | ... | 2·5 | 1·9 | 3·0 | ... | 1·3 | 2·0 | 2·5 | 0·6 |
| 16 | Kolába ... ... ... | ... | ... | 12·4 | ... | 7·7 | ... | 1·8 | 1·0 | 1·3 | ... | 0·4 | 0·3 | 1·7 | 0·2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 2·3 | ... | 4·3 | ... | 0·6 | 0·3 | 2·1 | ... | 0·3 | 0·3 | 0·5 | 0·1 |
| 18 | Kánara ... ... ... | ... | ... | 12·3 | ... | 0·3 | ... | 1·1 | 0·3 | 11·5 | ... | ... | 4·1 | 1·1 | 0·3 |
| | Total ... | ... | ... | 48·2 | ... | 19·9 | ... | 6·0 | 3·5 | 17·9 | ... | 2·0 | 6·7 | 5·8 | 1·2 |
| | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 160 | 100 | 100 | 100 | 100 |

67. **Outturn of Crops.**—The following table gives the anna valuation for the outturn of principal crops in each district. The anna valuation by Mámlatdárs purports to conform to the new standard prescribed by Government, *i.e.*, 16 annas represent an average crop. The statement, however, affords ground for doubt whether this new standard, which is opposed to local practice, is correctly kept in view. There is, besides, a general tendency to under-estimate the anna valuation of outturn as has been noticed in previous reports. Altogether the table must be taken as representing a merely approximate estimate.

*Approximate Anna Valuation of Principal Crops in each District, 1890-91.*

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Ragi. | Vari. | Tur. | Gram. | Cotton. |
| | *I.—Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad ... .. ... ... | 10 | 12 | 10 | 10 | 9 | 10 | 8 | 11 | 6 | 7 |
| 2 | Kaira ... ... ... ... ... | 11 | 14 | 8 | 11 | 14 | 13 | 11 | 13 | 4 | 14 |
| 3 | Panch Maháls ... ... ... | Maize 14 | 14 | 7 | 5 | 17 | 13 | 8 | 15 | 10 | 12 |
| 4 | Broach ... ... ... ... ... | 9 | 14 | 7 | 9 | 8 | ... | ... | 9 | 6 | 10 |
| 5 | Surat ... ... ... ... ... | 9 | 11 | 16 | 12 | 11 | 10 | 5 | 11 | 10 | 9 |
| | *II.—Deccan.* | | | | | | | | | | |
| 6 | Khándesh ... ... ... ... | 11 | 11 | 10 | 11 | 12 | 12 | ... | 12 | 10 | 14 |
| 7 | Násik ... ... ... ... ... | 9 | 12 | 12 | 12 | ... | 12 | 10 | 11 | 11 | 11 |
| 8 | Ahmadnagar ... ... ... ... | 12 | 8 | 9 | 8 | ... | 12 | 11 | 11 | 8 | 10 |
| 9 | Poona ... ... ... ... ... | 14 | 10 | 13 | 13 | 10 | 14 | 10 | 9 | 12 | 6 |
| 10 | Sholápur ... ... ... ... | 15 | 2 | 5 | 10 | ... | ... | 8 | 3 | 9 | 2 |
| 11 | Sátára ... ... ... ... ... | 11 | 9 | 10 | 9 | 8 | 10 | 10 | 9 | 10 | 10 |
| | *III.—Karnátak.* | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 10 | 9 | 13 | 8 | ... | 10 | 10 | 8 | 9 | 8 |
| 13 | Bijápur... ... ... ... ... | 13 | 9 | 6 | 13 | ... | ... | 8 | 9 | 13 | 7 |
| 14 | Dhárwár ... ... ... ... | 11 | 10 | 8 | 10 | ... | 10 | 10 | 10 | 12 | 7 |

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jawári. | Bájri. | Paddy. | Wheat. | Kodra. | Ragi. | Vari. | Tur. | Gram. | Cotton. |
| | *IV.—Konkan.* | | | | | | | | | | |
| 15 | Thána ... ... ... ... ... | ... | ... | 16 | ... | 16 | 13 | 13 | 14 | 11 | ... |
| 16 | Kolába ... ... ... ... ... | ... | ... | 12 | ... | 11 | 13 | 10 | 10 | 14 | ... |
| 17 | Ratnágiri ... ... ... ... | ... | ... | 13 | ... | 13 | 12 | 12 | 12 | ... | ... |
| 18 | Kánara... ... ... ... ... | ... | ... | 13 | ... | ... | 14 | ... | ... | ... | ... |
| | *Sind.* | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | 10 | 10 | 11 | 14 | ... | 11 | 10 | ... | 12 | 11 |
| 20 | Hyderabad ... ... .. ... | 13 | 13 | 11 | 14 | ... | ... | ... | ... | 13 | 12 |
| 21 | Shikárpur ... .. ... ... | 11 | 11 | 14 | 16 | ... | ... | ... | ... | 13 | 12 |
| 22 | Upper Sind Frontier ... ... ... | 10 | 12 | 13 | 14 | ... | ... | ... | ... | 15 | 11 |
| 23 | Thar and Parkar ... .. ... | ... | ... | ... | Not returned. | | | ... | ... | ... | ... |

*Note.*—In the above table the valuations are calculated on the standard by which 16 annas represent an average crop.

The heavy September-October rain injured ripening bájri in the South Deccan and Karnátak, but assisted a fair yield in Gujarát and North Deccan. Both *kharif* and *rabi* jowári were fairly good throughout; rabi jowári especially yielding a full average crop in the East Deccan and Karnátak. Rice suffered from want of moisture owing to deficient late rains in Gujarát, but fared well in the above-*ghât* districts and in the Konkan. Wheat and gram on the whole yielded a fair outturn, except in parts of Gujarát where they suffered from want of moisture. Other cereals and pulses were fairly good. Cotton was a full average crop in Khándesh, the principal cotton-growing district in the Deccan, but much below average in Gujarát and the Karnátak. In the Karnátak Districts the crop was injured by blight.

68. *Fruit-trees.*—A decrease is reported in mango, jack and cocoanut trees; while tamarind, toddy-palm and date-palm have increased. This enumeration of trees is, however, not worth much at present. Their distribution in the several provinces is noted below (trees in forest and village sites not being included):—

Fruit-trees (exclusive of Ratnágiri).

(*Figures in thousands.*)

| No. | Province. | | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|---|
| 1 | Gujarát ... ... | | 515 | 117 | 4 | 7 | 237 | 647 |
| 2 | Deccan ... ... | | 730 | 56 | 10 | 7 | 10 | 110 |
| 3 | Karnátak ... | | 356 | 103 | 19 | 67 | ... | 966 |
| 4 | Konkan ... ... | | 300 | 30 | 87 | 1,180 | 89 | 13 |
| | Total for the Presidency Proper. | 1890-91. | 1,961 | 306 | 120 | 1,261 | 336 | 1,736 |
| | | 1889-90. | 1,973 | 298 | 122 | 1,274 | 334 | 1,680 |
| | | | —12 | +8 | —2 | —13 | +2 | +56 |
| 5 | Sind ... ... | | 186 | ... | ... | 1 | ... | 151 |
| | Grand Total 1890-91... | | 2,147 | 306 | 120 | 1,262 | 336 | 1,887 |

Fruit-trees of special local importance are shown in the subjoined table so far as enumeration has yet been effected:—

| Trees and Districts. | Number. | Trees and Districts. | Number. |
|---|---|---|---|
| 1.—*Moha* (*Bassia latifolia.*) | | 5.—*Hirda* (*Terminalia chebula*). | |
| Kaira ... ... ... ... | 135,000 | | |
| Panch Maháls ... ... ... | 89,800 | | |
| Khándesh ... ... ... | 57,500 | | |
| Násik ... ... ... ... | 3,100 | Ahmadnagar ... ... ... | 10,600 |
| Broach ... ... ... ... | 1,200 | Násik ... ... ... ... | 1,000 |
| 2.—*Betel-nut* (*Areca catechu.*) | | 6.—*Fig* (*Ficus carica*). | |
| Kánara ... ... ... ... | 7,371,700 | | |
| Thána ... ... ... ... | 4,600 | | |
| Kolába ... ... ... ... | 2,200 | Poona ... ... ... ... | 36,000 |
| Sátára ... ... ... ... | 400 | Násik ... ... ... ... | 3,000 |
| | | Ahmadnagar ... ... ... | 2,000 |
| 3.—*Ráyan* (*Mimusops hexandra.*) | | Belgaum ... ... ... | 600 |
| | | Hyderabad ... ... ... | 600 |
| | | Shikárpur ... ... ... | 500 |
| Kaira ... ... ... ... | 74,800 | | |
| Panch Maháls ... ... ... | 3,900 | | |
| Broach ... ... ... ... | 1,700 | 7.—*Vine* (*Vitis Vinifera*). | |
| 4.—*Keshewnut* (*Anacardium occidentale.*) | | Násik ... ... ... ... | 38,500 |
| | | Poona ... ... ... ... | 31,800 |
| Kánara ... ... ... ... | 86,500 | Ahmadnagar ... ... ... | 27,700 |
| Thána ... ... ... ... | 5,200 | Shikárpur ... ... ... | 19,400 |
| Khándesh ... ... ... | 1,600 | Khándesh ... ... ... | 1,700 |
| Belgaum ... ... ... | 600 | Karáchi ... ... ... | 1,000 |

**Return No. IV—Irrigation.**

69. The net irrigated area now amounts to 3·13 per cent. of the net cropped area in the Presidency Proper and 86·79 per cent. in Sind. Though the total area under crops irrigated shows no variation, the net irrigated area gives a decrease of 11,000 acres or 1·39 per cent. in the Presidency Proper exclusive of Ratnágiri. The variations under the principal sub-heads are shown below :—

*Irrigated Area.*

| Detail. | Presidency Proper exclusive of Ratnágiri. | | | | | |
|---|---|---|---|---|---|---|
| | Thousand Acres. | | Increase. | | Decrease. | |
| | 1889-90. | 1890-91. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| *A.—Area Irrigated.* | | | | | | |
| 1. Irrigated from canals ... | 112 | 111 | ... | ... | 1 | 0·89 |
| 2. Do. from tanks, wells, &c. | 679 | 669 | ... | ... | 10 | 1·47 |
| 3. Total irrigated ... | 791 | 780 | ... | ... | 11 | 1·39 |
| *B.—Crops Irrigated.* | | | | | | |
| 4. Rice ... ... ... | 154 | 162 | 8 | 14·81 | ... | ... |
| 5. Wheat ... ... ... | 192 | 177 | ... | ... | 15 | 7·81 |
| 6. Sugarcane ... ... | 64 | 61 | ... | ... | 3 | 4·68 |
| 7. Other crops ... ... | 472 | 482 | 10 | 2·11 | ... | ... |
| 8. Total Crops irrigated ... | 882 | 882 | ... | ... | ... | ... |

NOTE.—The difference between columns 3 and 8 is due to the inclusion in column 8 of the area cropped with irrigation more than once.

The chief variations in the areas irrigated from canals, tanks and wells, &c., are in the districts noted in the margin. The canal area shows a considerable increase in Poona, which has not been explained. In this district, though net irrigated area gives an increase of but 1,300 acres, the total area increased by 12,500 acres of which 11,200 acres occurs in the area cropped under irrigation more than once. The variations in areas irrigated from tanks and wells are attributed to more or less seasonable rainfall in the areas concerned.

| District. | Canal. | Tanks, Wells, &c. | Net variations. |
|---|---|---|---|
| Sholápur .. | .. | —7,700 | —7,700 |
| Násik .. .. | .. | —5,300 | —5,300 |
| Ahmadnagar . | +100 | —5,100 | —5,000 |
| Khándesh .. | +600 | —4,300 | —3,700 |
| Dhárwár .. | +1,900 | —3,300 | —1,400 |
| Ahmadabad .. | +900 | +7,500 | +8,400 |
| Poona.. .. | —4,100 | +5,400 | +1,300 |
| Kaira .. .. | —100 | +1,000 | +900 |
| Belgaum .. | —300 | +900 | +600 |

70. Among irrigated crops rice gives an increase of 8,000 acres, chiefly in Ahmadabad (7,300 acres). Wheat also shows a considerable increase in Ahmadabad (2,600 acres); elsewhere, there is a general decrease, Sholápur (5,000), Sátára (4,600), Ahmadnagar (2,600), Násik (2,400), Poona (1,600) and Kaira (1,400). In sugarcane the principal decrease occurs in Dhárwár (2,000) and Násik (1,500).

**Return No. V.—Agricultural Stock.**

71. Of the 3 large cities which have not hitherto returned agricultural stock, as noticed in the last report, Ahmadabad and Surat this year returned their stock. Broach alone now does not return the city stock. The Collector has been addressed with a view to arrangements being made with the Municipality for its enumeration. Sind sends no agricultural stock returns, V. F. 13 not being represented in the forms in use. A considerable increase appears under all principal heads except under breeding-bulls and sheep. The former decrease is due probably to correction of former incorrect entries.

*Agricultural Stock.*

| Detail. | Presidency Proper exclusive of Ratna'giri. | | | | | |
|---|---|---|---|---|---|---|
| | Number in thousands. | | Increase. | | Decrease. | |
| | 1889-90. | 1890-91. | Thousands. | Per cent. | Thousands. | Per cent. |
| 1. Plough cattle... ... | 3,135 | 3,138 | 3 | ... | ... | ... |
| 2. Breeding-bulls ... | 30 | 22 | ... | ... | 8 | 26·66 |
| 3. Cattle for other purposes... ... ... | 134 | 148 | 14 | 10·45 | ... | ... |
| 4. Milch cattle ... ... | 2,718 | 2,785 | 67 | 2·46 | ... | ... |
| 5. Young stock ... ... | 2,056 | 2,094 | 38 | 1·84 | ... | ... |
| 6. Total cattle (columns 1—5) ... ... | 8,073 | 8,187 | 114 | 1·41 | ... | ... |
| 7. Horses and ponies ... | 139 | 140 | 1 | 0·72 | ... | ... |
| 8. Sheep... ... ... | 2,007 | 1,995 | ... | ... | 12 | 0·59 |
| 9. Goats ... ... ... | 1,173 | 1,276 | 103 | 8·78 | ... | ... |
| 10. Ploughs ... ... | 1,047 | 1,055 | 8 | 0·76 | ... | ... |
| 11. Carts ... ... ... | 472 | 482 | 10 | 2·11 | ... | ... |

The general increase is explained by (1) abundance of fodder and comparative freedon from epidemics, (2) purchases stimulated by a prosperous year and (3) in some districts return of stock, which had migrated in the previous year of scarce fodder. These general causes should, however, be accepted with caution, for the enumeration of stock is, as noticed in previous reports, still very defective.

72. The district variations under the principal heads are noted below :—

| | Districts. | Plough Oxen. | Cows. | She-Buffaloes. | Young Stock. | Total Cattle. | Sheep. | Goats. |
|---|---|---|---|---|---|---|---|---|
| 1 | Ahmadabad ... | +3,400 | +6,100 | +5,100 | +6,400 | +22,800 | +3,500 | +9,600 |
| 2 | Kaira ... ... | —4,400 | +1,100 | +2,000 | +7,700 | +6,300 | —3,900 | +2,800 |
| 3 | Panch Maháls ... | —11,900 | —9,800 | —3,200 | —9,400 | —34,800 | —300 | —3,500 |
| 4 | Broach ... ... | +450 | +600 | +700 | —1,000 | +1,100 | —1,000 | +4,400 |
| 5 | Surat ... ... | +300 | +300 | +1,800 | +5,100 | +10,500 | —100 | —3,100 |
| 6 | Khándesh ... ... | +2,100 | +1,200 | +4,700 | +22,000 | +28,700 | —1,300 | +10,100 |
| 7 | Násik ... ... | +7,500 | +14,300 | +1,600 | +3,000 | +27,700 | +3,200 | +21,800 |
| 8 | Ahmadnagar ... | +4,400 | +6,900 | +500 | +1,500 | +15,500 | +16,000 | +40,700 |
| 9 | Poona ... ... | +650 | +4,500 | +2,700 | —12,000 | —2,500 | —8,700 | +10,200 |
| 10 | Sholápur ... ... | +5,400 | +19,900 | +1,100 | +600 | +29,200 | —7,000 | +7,800 |
| 11 | Sátára ... ... | —2,300 | —300 | +1,100 | —1,300 | —3,600 | +6,000 | —200 |
| 12 | Belgaum ... ... | +1,300 | —2,100 | —400 | +5,200 | —2,400 | —4,100 | +2,400 |
| 13 | Bijápur ... ... | +4,400 | +2,900 | +1,400 | —300 | +7,900 | —11,000 | —1,700 |
| 14 | Dhárwár ... ... | —3,000 | +500 | +2,200 | +6,700 | +7,300 | —3,500 | —1,600 |
| 15 | Thána ... ... | —40 | —4,000 | —700 | —3,200 | —10,300 | —400 | +1,000 |
| 16 | Kolába ... ... | —150 | +2,200 | +300 | +3,200 | +6,300 | —200 | +1,800 |
| 17 | Kánara ... ... | +500 | +1,500 | +300 | +3,900 | +4,900 | +300 | +100 |

The large decrease in the Panch Maháls under all heads is nominal, being due to exclusion of stock of 104 villages for which complete statistics are not available and of which the stock was hitherto incorrectly included. In Thána the decrease is unexplained, but it may partly be due to return of cattle which poured in last year from Poona and Násik. The Poona decrease in "young stock" is attributed to disease.

73. The enumeration of sheep and goats is specially faulty owing to the roving habits of the herding classes. Goats show an increase in the Deccan and in Ahmadabad. The considerable decrease of sheep in Bijápur (11,000) is attributed to diminution of grazing areas by the extensive occupation of waste land from year to year.

Due attention is not yet paid to standing orders regarding the enumeration of outside stock, to which special attention was invited in the last report (paragraph 65), this remark applying particularly to Ahmadnagar, Belgaum and Khándesh.

*Ploughs and Carts.*—There are no variations worth mentioning.

**B—RAINFALL.**

74. The scope of duty assigned to the Director in connection with the registration and compilation of rainfall statistics has been considerably extended during the year, and the system of registration has been improved at the instance of the Meteorological Reporter to the Government of India as follows:—

*1st.*—A common hour for registration (8 A.M.) and a common rainfall week ending on Saturday 8 A.M. to be adopted for the whole of India.

*2nd.*—All rain-gauges to be *systematically* inspected.

*3rd.*—Symon's rain-gauges, tested by the Meteorological Department, to be the only description of gauge used.

*4th.*—Monthly returns of rainfall showing daily fall at each station, to be published by each Local Government; copies to be bound together and issued as an annual volume by the Imperial Meteorological Department.

*5th.*—For the purpose of calculating the number of rainy days, a fall of one-tenth of an inch and upwards to be taken to denote a rainy day.

The Director now compiles and publishes in the prescribed form monthly rain returns showing daily fall at 279 stations, 208 being for the Presidency Proper, 11 for Sind and 60 for Native States in Bombay. To secure systematic inspection of rain-gauges, Assistant and Deputy Collectors in charge of tálukas, Civil Surgeons and Deputy Sanitary Commissioners, have been appointed Inspecting Officers. For Native States the inspection has been assigned to Assistants and Deputy Assistants, to Political Agents, and Surgeons in charge of hospitals.

Initial inspection reports have been received from District Officers for a considerable number of stations. Complete inspection reports will be received during the current season, and it will then be possible to secure uniformity of registration in all essentials.

Season, 1890-91.

75. The rainfall for each district has been fully analysed in the appended tables (pp. xxiii—xxxv). In the following table the rainfall for each district Head-quarter town is compared with the average fall and with that of last year :—

*Rainfall at District Head-quarters.*

| No. | District Head-quarters. | | Annual Rainfall ending 31st December. | | | | |
|---|---|---|---|---|---|---|---|
| | | | Average of eleven years ending 1886. | 1889. | | 1890. | |
| | | | | Fall. | Rainy days. | Fall. | Rainy days. |
| | | | Inches. | Inches. | | Inches. | |
| 1 | Deccan. | Dhulia (Khándesh) ... | 25·79 | 17·65 | ... | 25·24 | 37 |
| 2 | Deccan. | Násik ... ... | 33·74 | 22·93 | ... | 29·30 | 49 |
| 3 | Deccan. | Ahmadnagar ... ... | 25·11 | 23·15 | ... | 21·60 | 36 |
| 4 | Deccan. | Poona ... ... | 31·06 | 37·49 | ... | 39·52 | 62 |
| 5 | Deccan. | Sholápur ... ... | 33·33 | 33·22 | ... | 28·33 | 34 |
| 6 | Deccan. | Sátára ... ... | 40·84 | 46·21 | ... | 37·45 | 80 |
| 7 | Karnátak. | Belgaum ... ... | 46·80 | 55·40 | ... | 49·85 | 83 |
| 8 | Karnátak. | Bijápur ... ... | 26·79 | 36·04 | ... | 28·56 | 38 |
| 9 | Karnátak. | Dhárwár ... ... | 32·95 | 38·64 | ... | 28·54 | 65 |
| 10 | Konkan. | Kárwár (Kánara)... ... | 116·62 | 179·93 | ... | 121·04 | 98 |
| 11 | Konkan. | Ratnágiri ... ... | 100·73 | 106·97 | ... | 120·16 | 96 |
| 12 | Konkan. | Alibág (Kolába) ... ... | 84·79 | 86·01 | ... | 95·65 | 90 |
| 13 | Konkan. | Thána ... ... | 99·12 | 96·73 | ... | 98·00 | 97 |
| 14 | Gujarát. | Surat... ... ... | 44·06 | 40·22 | ... | 56·35 | 53 |
| 15 | Gujarát. | Broach ... ... | 44·21 | 33·73 | ... | 26·98 | 37 |
| 16 | Gujarát. | Kaira... ... ... | 37·13 | 41·22 | ... | 27·24 | 46 |
| 17 | Gujarát. | Godhra (Panch Mahále) ... | 43·24 | 36·02 | ... | 37·11 | 46 |
| 18 | Gujarát. | Ahmadabad ... ... | 29·92 | 24·89 | ... | 22·75 | 43 |

*Note.*—The column of "Rainy days" for 1889 has been left blank, as 10 cents of rain now constitute a rainy day (instead of 1 cent) and no comparison could therefore be made.

The rainfall was generally below average in Gujarát (except in Surat), above average in the Konkan, and slightly below or up to average in the Deccan and Karnátak.

*Deccan.*—In Khándesh and the western tracts bordering on the Sahyádris the rainfall was on the whole seasonable and sufficient. In the eastern tracts, away from the ghâts, *kharíf* sowing rain was scant and breaks too prolonged. Here general relief came early in September. Late rains were heaviest in south and throughout beneficial to *rabi* crops. Kharíf outturn was fairly good in West Deccan and Khándesh, but poor in east, where however rabi was a good crop.

*Karnátak.*—Kharíf rain was favourable in tracts bordering on the Sahyádris. Elsewhere it was deficient and the breaks were injuriously prolonged as in the East Deccan. Early relief came by the 10th September in Bijápur, but general relief not till the end of the month. The late rains were heavy and favourable for rabi crops.

*Konkan.*—Rainfall throughout good except in Kánara, where September rain was short for rice. The late rains were injuriously heavy, especially in south. Kharíf outturn, however, was generally good especially in Thána and Kolába.

*Gujarát.*—Sowing rain in June was abnormally heavy in Surat, 10 to 30 inches being recorded between 18th and 21st and as much as 16 inches during 24 hours at Bárdoli on the 19th. Sown seed was washed away and had to be re-sown in many places. Rain in September was sufficient and seasonable, but the closing showers of early October were generally absent. The result was that rice suffered and the rabi area was not full. Kharíf crops, except rice, were fairly good, but rabi crops were comparatively poor. Fruits, such as mango, ráyan and mohwa, were a bumper crop.

Season, 1891-92.

76. There was no general sowing rain till the 4th week in June. In Gujarát it came as late as 20th July. Heavy rain fell in July and August, but in the East Deccan and Karnátak kharíf rain was scant both for general sowing and for growth of standing crops. In these rabi tracts fairly heavy rain fell in September and early October sufficient for general rabi sowing. But throughout the Deccan and Karnátak the late heavy rains failed, seriously injuring the prospects of harvest.

C.—CROP EXPERIMENTS.

77. The number of experiments made in 1890-91 was 77 as shown in the margin against 81 in 1889-90. These experiments are submitted to Government with a separate report.

Rice 12 ; jowári 9 ; ragi 7 ; wheat 8 ; kodra, groundnut, linseed, sugarcane, 5 each ; gram and nigerseed, 4 each ; wál and cotton, 3 each ; vari, 2 ; maize, potato, vatána, safflower and castor-oil seed, 1 each.

VIII.—TRADE AND TRADE STATISTICS.

78. A detailed report for the year ending 31st March 1891, has already been submitted to Government, as also the Sind Report with review. The trade registered in the Presidency Proper and Sind during the year is shown below :—

| Year. | Presidency Proper. | | | | Sind. | | | |
|---|---|---|---|---|---|---|---|---|
| | External Trade. | | Local Trade. | Total Trade. | External Trade. | | Local Trade. | Total Trade. |
| | Imports. | Exports. | | | Imports. | Exports. | | |
| | (Figures in lákhs of maunds = 1 maund 82$\frac{2}{7}$ lbs.) | | | | | | | |
| Average ... ... ... ... | 291 | 91 | 280 | 662 | 57 | 12 | 63 | 132 |
| 1889-90 ... ... ... ... | 281 | 89 | 256 | 626 | 94 | 16 | 65 | 175 |
| 1890-91 ... ... ... ... | 289 | 102 | 284 | 675 | 90 | 23 | 72 | 185 |
| Increase + or decrease — over average ... ... ... | —2 | +11 | +4 | +13 | +33 | +11 | +9 | +53 |
| Increase + or decrease — over last year ... ... ... | +8 | +13 | +28 | +49 | —4 | +7 | +7 | +10 |

The trade of the Presidency Proper as well as of Sind shows considerable improvement over average and that of the previous year. To the total trade of Sind the Punjáb contributes this year 97·4 per cent. The road-borne trade has, as usual, been registered at six selected *nákas* under the rotation system. With a view to estimate the probable amount of traffic in goods and passengers that would be available for the proposed five feeder lines in Gujarát, road-traffic was also registered by the Public Works Department, as a special case, at traffic stations carefully selected with a view to local conditions.

IX.—ARCHÆOLOGY.

79. No reports on the subject have been received from the District Officers under Government Resolution No. 1672, dated 13th April 1889, General Department.

X.—MINERAL STATISTICS.

80. During the year under report two returns of mineral statistics were submitted to the Government of India. The first contained information for the nine months ending 30th September 1890 and was submitted in January 1891, as required by the Government of India's letter No. 27-30-33 Statistics, dated 16th September 1890. These orders were superseded by the Government of India's Circular No. 7-22-18 Statistics, dated 20th March 1891, and an amended return for the calendar year was submitted as before in September.

CONCLUSION.

81. Ráo Báhádur Ichhárám Bhagwándás has continued to fill the post of Personal Assistant and by his zeal and a thorough command of his duties has earned high praise. I can also thoroughly endorse the previously recorded high estimate of services of Mr. Yashawantráo Nilkanth, the Superintendent.

Mr. Mehta has done excellent work on the Bhadgaon Farm.

I have the honour to be,
Sir,
Your most obedient Servant,
E. L. CAPPEL,
Director, Land Records and Agriculture,
Bombay.

# STATISTICS.

## A.—AGRICULTURAL.

I.—Area of Available Statistics.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

III. A.—Details under Khari'f and Rabi Crops.

III. B.—Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1890-91.

| No. | District. | Number and Area of Villages.* | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Surveyed Alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. | 832 | 2,318,551 | 52 | 123,518 | 884 | 2,442,069 | 448 | 10,56,400 | 384 | 1,262,151 | 36 | 98,917 | 868 | 2,417,468 | .. | .. .. | 16 | 24,601 | 16 | 24,601 |
| 2 | Kaira .. .. .. | 563 | 994,259 | 28 | 27,464 | 591 | 1,021,723 | 486 | 757,835 | 91 | 177,132 | .. | .... | 527 | 934,967 | 36 | 59,292 | 28 | 27,464 | 64 | 86,756 |
| 3 | Panch Mahále .. .. | 611½ | 902,255 | 79½ | 125,683 | 691 | 1,027,938 | 403 | 627,269 | 149½ | 198,200 | 32 | 42,652 | 584½ | 868,121 | 59 | 76,786 | 47½ | 83,031 | 106½ | 59,817 |
| 4 | Broach .. .. .. | 408 | 917,809 | 15 | 18,724 | 423 | 936,533 | 407 | 916,630 | 1 | 1,179 | .. | .... | 408 | 917,809 | .. | .... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat .. .. .. | 820½ | 1,026,650 | 32½ | 31,055 | 853 | 1,057,705 | 810½ | 1,014,415 | 10 | 12,235 | 4½ | 5,254 | 825 | 1,031,904 | .. | .... | 28 | 25,801 | 28 | 25,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. | 3,223 | 5,447,660 | 111½ | 209,020 | 3,334½ | 5,656,680 | 2,678½ | 4,628,188 | 186 | 365,723 | 63½ | 109,099 | 2,928 | 5,097,960 | 358½ | 458,799 | 48 | 99,921 | 406½ | 558,720 |
| 7 | Násik .. .. .. | 1,512 | 3,419,921 | 184 | 301,520 | 1,696 | 3,721,441 | 1,500 | 3,394,658 | .. | .... | 80 | 168,073 | 1,580 | 3,562,731 | 12 | 25,263 | 104 | 133,447 | 116 | 158,710 |
| 8 | Ahmadnagar .. .. | 1,223 | 3,668,048 | 151 | 550,889 | 1,374 | 4,218,937 | 1,223 | 3,668,048 | .. | .. .. | 110½ | 444,596 | 1,333½ | 4,112,644 | .. | .... | 40½ | 106,293 | 40½ | 106,293 |
| 9 | Poona .. .. .. | 1,002¾ | 2,866,115 | 201¼ | 505,297 | 1,204 | 3,371,412 | 1,002¾ | 2,866,034 | .. | .. .. | 162¼ | 464,020 | 1,165 | 3,330,054 | .. | 81 | 39 | 41,277 | 39 | 41,358 |
| 10 | Sholápur .. .. .. | 665 | 2,697,942 | 52 | 209,111 | 717 | 2,907,053 | 665 | 2,697,942 | .. | .... | 52 | 209,111 | 717 | 2,907,053 | .. | .. .. | .. | .... | .. | .... |
| 11 | Sátára .. .. .. | 961 | 2,476,327 | 396 | 608,267 | 1,357 | 3,084,594 | 961 | 2,476,327 | .. | .... | 269 | 493,413 | 1,230 | 2,969,740 | .. | .... | 127 | 114,854 | 127 | 114,854 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. | 913 | 2,347,859 | 220 | 499,443 | 1,133 | 2,847,302 | 913 | 2,347,859 | .. | .... | 162 | 471,317 | 1,075 | 2,819,176 | .. | .... | 58 | 28,126 | 58 | 28,126 |
| 13 | Bijápur .. .. .. | 1,011 | 3,205,699 | 162 | 422,008 | 1,173 | 3,627,707 | 1,011 | 3,205,699 | .. | .... | 154 | 388,120 | 1,165 | 3,593,819 | .. | .... | 8 | 33,888 | 8 | 33,888 |
| 14 | Dhárwár .. .. .. | 1,289 | 2,689,249 | 184 | 256,568 | 1,473 | 2,945,817 | 1,289 | 2,689,249 | .. | .... | 137 | 180,871 | 1,426 | 2,870,120 | .. | .... | 47 | 75,697 | 47 | 75,697 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. | 1,880 | 2,397,964 | 104 | 122,168 | 1,984 | 2,520,132 | 1,844 | 2,355,467 | 22 | 25,762 | 28 | 33,852 | 1,894 | 2,415,081 | 14 | 16,735 | 76 | 88,316 | 90 | 105,051 |
| 16 | Kolába .. .. .. | 1,264 | 1,103,412 | 80 | 30,461 | 1,344 | 1,133,873 | 771 | 581,076 | 491 | 522,282 | 6 | 3,466 | 1,268 | 1,106,774 | 2 | 104 | 74 | 26,995 | 76 | 27,099 |
| 17 | Ratnágiri .. .. .. | 1,271½ | 2,393,881 | 62 | 108,738 | 1,333½ | 2,502,619 | 54½ | 126,691 | 144 | 246,539 | .. | .... | 198½ | 373,230 | 1,073 | 2,020,651 | 62 | 108,738 | 1,135 | 2,129,389 |
| 18 | Kánara .. .. .. | 1,416 | 2,522,359 | .. | .... | 1,416 | 2,522,359 | 1,416 | 2,522,359 | .. | .. .. | .. | .... | 1,416 | 2,522,359 | .. | .... | .. | .... | .. | .... |
| | Total A. ... | 20,866¼ | 43,395,960 | 2,114¾ | 4,149,934 | 22,981 | 47,545,894 | 17,833¼ | 37,927,096 | 1,478½ | 2,811,153 | 1,296¾ | 3,112,761 | 20,608½ | 43,851,010 | 1,554½ | 2,657,711 | 818 | 1,037,173 | 2,372½ | 3,694,884 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi .. .. .. | 859 | 7,654,429 | 14 | 35,700 | 873 | 7,690,129 | 774 | 3,445,233 | 62 | 1,936,518 | 13 | 26,841 | 849 | 5,408,592 | 23 | 2,272,678 | 1 | 8,859 | 24 | 2,281,537 |
| 20 | Hyderabad .. .. .. | 1,390 | 5,481,453 | 57 | 263,907 | 1,447 | 5,745,360 | 1,263 | 4,218,785 | 127 | 1,262,668 | 57 | 263,907 | 1,447 | 5,745,360 | .. | .... | .. | .... | .. | .... |
| 21 | Shikárpur .. .. .. | 1,174 | 4,941,190 | 17 | 279,085 | 1,191 | 5,220,275 | 1,142 | 4,066,623 | .. | .... | 14 | 233,674 | 1,156 | 4,300,297 | 32 | 874,567 | 3 | 45,411 | 35 | 919,978 |
| 22 | Upper Sind Frontier .. | 299 | 1,568,582 | 6 | 36,722 | 305 | 1,605,304 | 233 | 677,554 | 1 | 120,531 | 5 | 23,337 | 239 | 821,422 | 65 | 770,497 | 1 | 13,385 | 66 | 783,882 |
| 23 | Thar and Párkar .. .. | 291 | 8,145,500 | .. | .... | 291 | 8,145,500 | .. | .... | 291 | 8,145,500 | .. | .... | 291 | 8,145,500 | .. | .... | .. | .... | .. | .... |
| | Total B. ... | 4,013 | 27,791,154 | 94 | 615,414 | 4,107 | 28,406,568 | 3,412 | 12,408,195 | 481 | 11,465,217 | 89 | 547,759 | 3,982 | 24,421,171 | 120 | 3,917,742 | 5 | 67,655 | 125 | 3,985,397 |
| | Grand Total .. | 24,879¼ | 71,187,114 | 2,208¾ | 4,765,348 | 27,088 | 75,952,462 | 21,245¼ | 50,335,291 | 1,959½ | 14,276,370 | 1,385¾ | 3,660,520 | 24,590½ | 68,272,181 | 1,674½ | 6,575,453 | 823 | 1,104,828 | 2,497½ | 7,680,281 |

* Exclusive of Foreign Territory, Feudatory and Tributary States.

# II.—Area, Cultivated and Uncultivated, 1890-91.

| No. | District. | | Total area as in columns 5, 6 and 7 of Return No. I. | Cultivated Area. Gross area cropped. | Deduct area cropped more than once. | Remainder net area cropped. | Add current Fallows. | Total columns 5 and 6. | Details of column 7. Assessed Land. | Unassessed Land | Uncultivated Area. Available for Cultivation. Assessed Land. | Unassessed Land. | Not available for Cultivation. Forest. | Other. | Total columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | A.—Bombay Presidency Proper. | | Acres. | | | | | Acres. | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... | Rayatwári ... .. | 1,056,400 | 721,369 | 17,154 | 704,215 | 77,639 | 781,854 | 779,502 | 2,352 | 70,798 | 13,949 | 21,554 | 168,245 | 274,546 |
| | | Other Government. | 1,262,151 | 596,528 | 2,221 | 594,307 | 395,074 | 989,381 | 987,116 | 2,265 | ..... | 6,265 | ..... | 266,505 | 272,770 |
| | | Alienated ... ... | 98,917 | 42,927 | 102 | 42,825 | 56,011 | 98,836 | 98,836 | ..... | ..... | ..... | ..... | 81 | 81 |
| | | Total ... | 2,417,468 | 1,360,824 | 19,477 | 1,341,347 | 5 8,724 | 1,870,071 | 1,865,454 | 4,617 | 70,798 | 20,214 | 21,554 | 434,831 | 547,397 |
| 2 | Kaira ... ... ... | Rayatwári ... ... | 757,835 | 564,603 | 15,077 | 549,526 | 38,417 | 587,943 | 587,455 | 488 | 69,019 | 1,295 | 39 | 99,539 | 169,892 |
| | | Other Government. | 177,132 | 160,192 | 4,516 | 155,676 | 5,761 | 161,437 | 161,408 | 29 | 291 | 21 | ..... | 15,383 | 15,695 |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 934,967 | 724,795 | 19,593 | 705,202 | 44,178 | 749,380 | 748,863 | 517 | 69,310 | 1,316 | 39 | 114,922 | 185,587 |
| 3 | Panch Maháls ... ... | Rayatwári ... ... | 627,269 | 275,984 | 43,799 | 232,185 | 29,733 | 261,918 | 250,653 | 2,265 | 84,075 | 95,693 | 14,421 | 41,362 | 365,351 |
| | | Other Government. | 198,200 | 68,974 | 6,326 | 62,618 | 88,000 | 150,648 | 150,289 | 359 | ..... | 1,289 | 16,730 | 29,533 | 47,552 |
| | | Alienated ... ... | 42,652 | 23,595 | 1,883 | 21,712 | 15,255 | 36,967 | 36,967 | ..... | ..... | ..... | ..... | 5,685 | 5,685 |
| | | Total ... | 868,121 | 368,553 | 52,008 | 316,545 | 132,988 | 449,533 | 446,909 | 2,624 | 84,075 | 96,982 | 160,951 | 76,580 | 418,588 |
| 4 | Broach ... ... ... | Rayatwári ... ... | 916,630 | 595,111 | 377 | 594,734 | 51,112 | 645,846 | 638,186 | 7,660 | 25,935 | 2,024 | ..... | 242,825 | 270,784 |
| | | Other Government. | 1,179 | 900 | ..... | 900 | 243 | 1,143 | 1,143 | ..... | ..... | ..... | ..... | 36 | 36 |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 917,809 | 596,011 | 377 | 595,634 | 51,355 | 646,989 | 639,329 | 7,660 | 25,935 | 2,024 | ... | 242,861 | 270,820 |
| 5 | Surat ... ... ... | Rayatwári ... ... | 1,014,415 | 537,562 | 58,684 | 478,878 | 245,602 | 724,480 | 722,742 | 1,738 | 35,136 | 30,027 | 44,555 | 180,217 | 289,935 |
| | | Other Government. | 12,235 | 5,812 | 585 | 5,227 | 4,426 | 9,653 | 9,653 | ..... | 699 | 759 | ..... | 1,124 | 2,582 |
| | | Alienated ... ... | 5,254 | 3,795 | 19 | 3,776 | 1,117 | 4,893 | 4,893 | ..... | 212 | ..... | ..... | 149 | 361 |
| | | Total ... | 1,031,904 | 547,169 | 59,288 | 487,881 | 251,145 | 739,026 | 737,288 | 1,738 | 36,047 | 30,786 | 44,555 | 181,490 | 292,878 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | Rayatwári ... .. | 4,623,138 | 2,888,982 | 10,930 | 2,878,052 | 155,466 | 3,033,518 | 3,027,429 | 6,089 | 417,878 | 256,678 | 325,783 | 589,281 | 1,589,620 |
| | | Other Government. | 365,723 | 51,392 | ..... | 51,392 | 538 | 51,930 | 2,980 | 48,950 | 4 | 131,113 | 182,061 | 615 | 313,793 |
| | | Alienated ... ... | 109,099 | 72,033 | 179 | 71,854 | 8,608 | 80,462 | 80,356 | 106 | 10,553 | 5,340 | 750 | 11,994 | 28,637 |
| | | Total ... | 5,097,960 | 3,012,407 | 11,109 | 3,001,298 | 164,612 | 3,165,910 | 3,110,765 | 55,145 | 428,435 | 393,131 | 508,594 | 601,890 | 1,932,050 |
| 7 | Násik ... ... ... | Rayatwári ... ... | 3,394,658 | 1,915,444 | 24,719 | 1,890,725 | 287,150 | 2,177,875 | 2,177,395 | 480 | 100,040 | 42,159 | 760,829 | 313,755 | 1,216,783 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 168,073 | 111,211 | 1,687 | 109,524 | 16,968 | 126,492 | 126,460 | 32 | 8,658 | 8,755 | 2,291 | 21,877 | 41,581 |
| | | Total ... | 3,562,731 | 2,026,655 | 26,406 | 2,000,249 | 304,118 | 2,304,367 | 2,303,855 | 512 | 108,698 | 50,914 | 763,120 | 335,632 | 1,258,364 |
| 8 | Ahmadnagar ... ... | Rayatwári ... ... | 3,668,048 | 2,447,673 | 26,535 | 2,421,138 | 286,768 | 2,707,906 | 2,707,658 | 248 | 58,835 | 48,518 | 539,025 | 313,764 | 960,142 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Allenated ... ... | 444,596 | 324,474 | 1,498 | 322,976 | 41,426 | 364,402 | 364,381 | 21 | 11,647 | 10,692 | 394 | 57,461 | 80,194 |
| | | Total ... | 4,112,644 | 2,772,147 | 28,033 | 2,744,114 | 328,194 | 3,072,308 | 3,072,039 | 269 | 70,482 | 59,210 | 539,419 | 371,225 | 1,040,336 |
| 9 | Poona ... ... ... | Rayatwári ... ... | 2,866,034 | 1,863,132 | 81,726 | 1,781,406 | 294,221 | 2,075,627 | 2,074,920 | 707 | 28,347 | 4,096 | 433,181 | 324,783 | 790,407 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 464,020 | 322,369 | 12,603 | 309,766 | 56,020 | 365,786 | 365,633 | 153 | 1,694 | 1,364 | 1,295 | 93,881 | 98,234 |
| | | Total ... | 3,330,054 | 2,185,501 | 94,329 | 2,091,172 | 350,241 | 2,441,413 | 2,440,553 | 860 | 30,041 | 5,460 | 434,476 | 418,664 | 888,641 |
| 10 | Sholápur ... ... | Rayatwári ... ... | 2,697,942 | 2,031,977 | 24,799 | 2,007,178 | 274,515 | 2,281,693 | 2,281,363 | 330 | 17,848 | 2,722 | 177,605 | 218,074 | 416,249 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 209,111 | 152,350 | 1,847 | 150,503 | 24,500 | 175,003 | 174,887 | 116 | 125 | 3,624 | ..... | 30,359 | 34,108 |
| | | Total | 2,907,053 | 2,184,327 | 26,646 | 2,157,681 | 299,015 | 2,456,696 | 2,456,250 | 446 | 17,973 | 6,346 | 177,605 | 248,433 | 450,357 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Sátára ... | Rayatwári ... | 2,476,327 | 1,581,806 | 89,486 | 1,492,320 | 293,022 | 1,785,342 | 1,785,070 | 272 | 27,307 | 4,121 | 424,048 | 235,509 | 690,985 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 493,413 | 331,204 | 24,580 | 306,624 | 99,396 | 406,020 | 406,020 | ..... | 258 | 8,719 | 12,403 | 66,013 | 87,393 |
| | | Total ... | 2,969,740 | 1,913,010 | 114,066 | 1,798,944 | 392,418 | 2,191,362 | 2,191,090 | 272 | 27,565 | 12,840 | 436,451 | 301,522 | 778,378 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 2,347,859 | 1,456,262 | 24,740 | 1,431,522 | 243,487 | 1,675,009 | 1,673,555 | 1,454 | 63,072 | 18,807 | 439,028 | 151,943 | 672,350 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 471,317 | 317,822 | 2,821 | 315,001 | 92,867 | 407,868 | 407,868 | ..... | 29,333 | 1,469 | 2,907 | 29,740 | 63,449 |
| | | Total ... | 2,819,176 | 1,774,084 | 27,561 | 1,746,523 | 336,354 | 2,082,877 | 2,081,423 | 1,454 | 92,405 | 20,276 | 441,935 | 181,683 | 736,299 |
| 13 | Bijápur ... | Rayatwári ... | 3,205,699 | 2,485,554 | 4,566 | 2,480,988 | 292,045 | 2,773,033 | 2,772,958 | 75 | 80,928 | 19,574 | 162,451 | 169,713 | 432,666 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 388,120 | 284,607 | 392 | 284,215 | 38,925 | 323,140 | 323,101 | 39 | 12,047 | 1,176 | 27,184 | 24,573 | 64,980 |
| | | Total ... | 3,593,819 | 2,770,161 | 4,958 | 2,765,203 | 330,970 | 3,096,173 | 3,096,059 | 114 | 92,975 | 20,750 | 189,635 | 194,286 | 497,646 |
| 14 | Dhárwár ... | Rayatwári ... | 2,689,249 | 1,977,602 | 25,656 | 1,951,946 | 221,903 | 2,173,849 | 2,173,691 | 158 | 48,474 | 1 | 276,365 | 190,560 | 515,400 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 180,871 | 111,104 | 2,060 | 109,044 | 29,730 | 138,774 | 138,582 | 192 | 11,343 | 14,635 | ..... | 16,119 | 42,097 |
| | | Total ... | 2,870,120 | 2,088,706 | 27,716 | 2,060,990 | 251,633 | 2,312,623 | 2,312,273 | 350 | 59,817 | 14,636 | 276,365 | 206,679 | 557,497 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 2,355,467 | 518,160 | 6,115 | 512,045 | 490,979 | 1,003,024 | 998,754 | 4,270 | 42,750 | 71,592 | 525,547 | 712,554 | 1,352,443 |
| | | Other Government ... | 25,762 | 6,946 | 21 | 6,925 | 3,862 | 10,787 | 10,642 | 145 | 76 | 7,738 | 446 | 6,715 | 14,975 |
| | | Alienated ... | 33,852 | 8,495 | 72 | 8,423 | 10,123 | 18,546 | 18,420 | 126 | ..... | 6,119 | 1,303 | 7,884 | 15,306 |
| | | Total ... | 2,415,081 | 533,601 | 6,208 | 527,393 | 504,964 | 1,032,357 | 1,027,816 | 4,541 | 42,826 | 85,449 | 527,296 | 727,153 | 1,382,724 |
| 16 | Kolába ... | Rayatwári ... | 581,076 | 182,650 | 5,808 | 176,842 | 115,722 | 292,564 | 290,662 | 1,902 | 3,865 | 35,232 | 139,795 | 109,620 | 288,512 |
| | | Other Government ... | 522,232 | 164,772 | 5,047 | 159,725 | 136,616 | 296,341 | 296,134 | 207 | 152 | 5,164 | 81,943 | 138,632 | 225,891 |
| | | Alienated ... | 3,466 | 977 | 25 | 952 | 1,252 | 2,204 | 2,204 | ..... | ..... | 608 | ..... | 654 | 1,262 |
| | | Total ... | 1,106,774 | 348,399 | 10,880 | 337,519 | 253,590 | 591,109 | 589,000 | 2,109 | 4,017 | 41,004 | 221,738 | 248,906 | 515,665 |
| 17 | Ratnágiri ... | Rayatwári ... | 126,691 | 38,819 | 1,626 | 37,193 | 40,046 | 77,239 | 77,168 | 71 | 171 | 896 | 4,626 | 43,759 | 49,452 |
| | | Other Government ... | 246,539 | 81,187 | 3,711 | 77,476 | 93,342 | 170,818 | 170,806 | 12 | 57 | 1,592 | 5,352 | 68,720 | 75,721 |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 373,230 | 120,006 | 5,337 | 114,669 | 133,388 | 248,057 | 247,974 | 83 | 228 | 2,488 | 9,978 | 112,479 | 125,173 |
| 18 | Kánara ... | Rayatwári ... | 2,522,359 | 251,981 | 11,582 | 240,399 | 83,411 | 323,810 | 323,685 | 125 | 61,357 | 1,403 | 1,934,346 | 201,443 | 2,198,549 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,522,359 | 251,981 | 11,582 | 240,399 | 83,411 | 323,810 | 323,685 | 125 | 61,357 | 1,403 | 1,934,346 | 201,443 | 2,198,549 |
| | Total A. ... | Rayatwári ... | 37,927,096 | 22,334,671 | 473,379 | 21,861,292 | 3,521,238 | 25,382,530 | 25,351,846 | 30,684 | 1,235,835 | 648,787 | 6,352,998 | 4,306,946 | 12,544,566 |
| | | Other Government ... | 2,811,153 | 1,136,703 | 22,427 | 1,114,276 | 727,862 | 1,842,138 | 1,790,171 | 51,967 | 1,279 | 153,941 | 286,532 | 527,263 | 969,015 |
| | | Alienated ... | 3,112,761 | 2,106,963 | 49,768 | 2,057,195 | 492,198 | 2,549,393 | 2,548,608 | 785 | 85,870 | 62,501 | 48,527 | 366,470 | 563,368 |
| | | Total ... | 43,851,010 | 25,578,337 | 545,574 | 25,032,763 | 4,741,298 | 29,774,061 | 29,690,625 | 83,436 | 1,322,984 | 865,229 | 6,688,057 | 5,200,679 | 14,076,949 |
| | B.—SIND. | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | 5,408,592 | 495,761 | 46,553 | 449,208 | 431,680 | 880,888 | 524,286 | 356,602 | 70,242 | 961,024 | 117,105 | 3,379,333 | 4,527,704 |
| 20 | Hyderabad... | | 5,745,360 | 849,175 | 13,836 | 835,339 | 1,346,843 | 2,182,182 | 1,705,958 | 476,224 | 385,283 | 1,933,795 | 128,951 | 1,115,149 | 3,563,178 |
| 21 | Shikárpur ... | | 4,300,297 | 1,024,697 | 167,357 | 857,340 | 652,324 | 1,509,664 | 1,091,056 | 418,608 | 160,538 | 1,540,852 | 312,169 | 777,074 | 2,790,633 |
| 22 | Upper Sind Frontier | | 821,422 | 168,669 | 7,509 | 161,160 | 356,253 | 517,413 | 436,951 | 80,462 | 28,613 | 120,184 | 46,405 | 108,807 | 304,009 |
| 23 | Thar and Párkar ... | | 8,145,500 | 584,300 | 2,537 | 581,763 | 695,610 | 1,277,373 | 588,231 | 689,142 | ... | ... | ... | 6,868,127 | 6,868,127 |
| | | Total B. ... | 24,421,171 | 3,122,602 | 237,792 | 2,884,810 | 3,482,710 | 6,367,520 | 4,346,482 | 2,021,038 | 644,676 | 4,555,855 | 604,630 | 12,248,490 | 18,053,651 |
| | | GRAND TOTAL ... | 68,272,181 | 28,700,939 | 783,366 | 27,917,573 | 8,224,008 | 36,141,581 | 34,037,107 | 2,104,474 | 1,967,660 | 5,421,084 | 7,292,687 | 17,449,169 | 32,130,600 |

# III.—Crops, 1890-91.

| No | District. | | I—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet), Sorghum vulgare, &c. | Bájri (Spiked Millet), Pennisetum Typhoideum. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu), Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Maka), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Eleusine coracana. | Rále, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum maliaceum. P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum pilosum. | Amaranth (Rájgira), Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | Acres. |
| | I.—*Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 157,895 | 145,419 | 52,166 | 74,266 | 12,302 | 2,483 | 10,641 | 2,329 | 59 | 4,463 | 7,582 | ..... | 14 | ..... | 469,619 |
| | | Other Government ... ... | 139,153 | 97,308 | 8,189 | 76,475 | 3,293 | 739 | 8,035 | 861 | 210 | 2,650 | 13,465 | ..... | ..... | ..... | 350,378 |
| | | Alienated ... ... ... | 8,094 | 4,987 | 1,404 | 2,432 | 142 | 215 | 269 | 65 | ..... | 29 | 550 | ..... | ..... | ..... | 18,187 |
| | | Total ... | 305,142 | 247,714 | 61,759 | 153,173 | 15,737 | 3,437 | 18,945 | 3,255 | 269 | 7,142 | 21,597 | ... | 14 | ... | 838,184 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 42,788 | 176,110 | 93,012 | 11,447 | 7,107 | 341 | 77,006 | 50,212 | 280 | 371 | 1,775 | ..... | 101 | 12 | 460,562 |
| | | Other Government ... ... | 13,124 | 47,983 | 11,767 | 1,023 | 289 | 26 | 34,941 | 8,888 | 40 | 290 | 39 | ..... | 37 | 256 | 118,703 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 55,912 | 224,093 | 104,779 | 12,470 | 7,396 | 367 | 111,947 | 59,100 | 320 | 661 | 1,814 | ... | 138 | 268 | 579,265 |
| 3 | Panch Maháls... | Rayatwári ... ... ... | 2,030 | 30,207 | 35,668 | 8,312 | 876 | 72,397 | 15,452 | 11,493 | 27 | 1,252 | 12,181 | 128 | 20 | 1,409 | 191,452 |
| | | Other Government ... ... | 1,873 | 8,946 | 10,979 | 899 | 259 | 15,342 | 5,935 | 3,431 | ..... | 948 | 3,097 | 377 | ..... | 232 | 52,318 |
| | | Alienated .. ... ... | 271 | 3,833 | 3,924 | 230 | 44 | 3,959 | 2,477 | 1,397 | 6 | 55 | 1,380 | 30 | ..... | 30 | 17,636 |
| | | Total ... | 4,174 | 42,986 | 50,571 | 9,441 | 1,179 | 91,698 | 23,864 | 16,321 | 33 | 2,255 | 16,658 | 535 | 20 | 1,671 | 261,406 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 91,301 | 20,876 | 14,646 | 53,606 | ..... | 16 | 6,496 | 186 | 8 | 1 | ..... | ..... | 2 | 310 | 187,448 |
| | | Other Government ... ... | 109 | 3 | 13 | 55 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 181 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 91,410 | 20,879 | 14,659 | 53,661 | ... | 16 | 6,497 | 186 | 8 | 1 | ... | ... | 2 | 310 | 187,629 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 95,393 | 7,818 | 102,430 | 31,311 | ..... | ..... | 32,578 | 12,750 | 2 | 92 | 1,014 | 216 | 5 | 380 | 283,989 |
| | | Other Government ... ... | 1,582 | 8 | 978 | 64 | ..... | ..... | 339 | 72 | ..... | ..... | ..... | ..... | ..... | ..... | 3,043 |
| | | Alienated ... ... ... | 2,488 | 10 | 282 | 20 | ..... | ..... | 113 | 57 | ..... | ..... | ..... | ..... | ..... | ..... | 2,970 |
| | | Total ... | 99,463 | 7,836 | 103,690 | 31,395 | ... | ... | 33,030 | 12,879 | 2 | 92 | 1,014 | 216 | 5 | 380 | 290,002 |
| | II.—*Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 504,595 | 689,916 | 15,569 | 202,076 | 6 | 2,335 | 2,427 | 10,301 | 341 | 4,533 | 2,035 | 1,137 | 292 | 114 | 1,435,677 |
| | | Other Government ... ... | 1,789 | 6,300 | 10,249 | 6,123 | ..... | 269 | 1,857 | 2,248 | 13 | 579 | 2,198 | 492 | 9 | 6 | 32,132 |
| | | Alienated ... ... ... | 17,789 | 11,776 | 967 | 3,136 | ..... | 217 | 5 | 262 | 2 | 174 | 53 | 34 | 33 | ..... | 34,448 |
| | | Total ... | 524,173 | 707,992 | 26,785 | 211,335 | 6 | 2,821 | 4,289 | 12,811 | 356 | 5,286 | 4,286 | 1,663 | 334 | 120 | 1,502,257 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 131,222 | 764,898 | 51,811 | 316,676 | ..... | 2,632 | ..... | 148,839 | 1,121 | 42,836 | 947 | 1,894 | 180 | ..... | 1,463,056 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 4,573 | 36,901 | 2,038 | 32,037 | ..... | 181 | ..... | 7,811 | 162 | 1,325 | 827 | 42 | 10 | ..... | 85,907 |
| | | Total ... | 135,795 | 801,799 | 53,849 | 348,713 | ... | 2,813 | ... | 156,650 | 1,283 | 44,161 | 1,774 | 1,936 | 190 | ... | 1,548,963 |
| 8 | Ahmadnagar ... | Rayatwári ... ... .. | 1,059,430 | 640,478 | 12,034 | 261,551 | 156 | 707 | 189 | 32,876 | 926 | 11,337 | 225 | 4,507 | 342 | 494 | 2,025,252 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. ... ... | 180,097 | 66,439 | 258 | 22,941 | 30 | 76 | ..... | ..... | 64 | 26 | ..... | 30 | 13 | ..... | 269,974 |
| | | Total ... | 1,239,527 | 706,917 | 12,292 | 284,492 | 186 | 783 | 189 | 32,876 | 990 | 11,363 | 225 | 4,537 | 355 | 494 | 2,295,226 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 755,527 | 527,922 | 58,810 | 90,985 | 885 | 2,129 | 22 | 56,236 | 1,765 | 36,756 | 270 | 8,081 | 475 | 2,302 | 1,542,165 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 110,481 | 115,532 | 5,821 | 20,755 | 53 | 100 | 1 | 5,407 | 261 | 2,283 | ..... | 1,316 | 3 | 603 | 262,616 |
| | | Total ... | 866,008 | 643,454 | 64,631 | 111,740 | 938 | 2,229 | 23 | 61,643 | 2,026 | 39,039 | 270 | 9,397 | 478 | 2,905 | 1,804,781 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári .. .. .. | 1,413,849 | 105,308 | 51,392 | 51,324 | 919 | 12,703 | 1 | 45 | 1,052 | ... | ... | 262 | 56 | 8,230 | 1,610,413 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated .. .. .. | 106,069 | 9,976 | 1,080 | 4,009 | 32 | 992 | ... | ... | 45 | 101 | ... | 5 | ... | 865 | 123,174 |
| | | Total ... | 1,519,918 | 115,284 | 16,249 | 55,333 | 951 | 13,695 | 1 | 45 | 1,097 | 1,596 | ... | 267 | 56 | 9,095 | 1,733,587 |
| 11 | Sátára ... ... | Rayatwári .. .. .. | 500,968 | 466,278 | 29,989 | 50,713 | 4,298 | 7,593 | 67 | 51,049 | 22,242 | 39,395 | 391 | ... | 573 | 5,359 | 1,178,915 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated .. .. . | 100,154 | 78,641 | 11,751 | 11,468 | 1,194 | 2,344 | 1 | 16,043 | 8,485 | 12,581 | ... | ... | 141 | 581 | 243,384 |
| | | Total ... | 601,122 | 544,919 | 41,740 | 62,181 | 5,492 | 9,937 | 68 | 67,092 | 30,727 | 51,976 | 391 | ... | 714 | 5,940 | 1,422,299 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári .. .. .. | 599,678 | 112,035 | 106,510 | 98,793 | 73 | 5,608 | 38 | 46,239 | 70,305 | 26,053 | ... | ... | 2 | 26 | 1,065,360 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated .. .. .. | 148,198 | 33,643 | 6,387 | 15,269 | 5 | 1,724 | ... | 5,561 | 13,875 | 3,481 | ... | ... | ... | ... | 228,143 |
| | | Total ... | 747,876 | 145,678 | 112,897 | 114,062 | 78 | 7,332 | 38 | 51,800 | 84,180 | 29,534 | ... | ... | 2 | 26 | 1,293,503 |
| 13 | Bijápur ... ... | Rayatwári .. .. .. | 1,354,679 | 211,985 | 6,330 | 157,511 | 4 | 745 | 46 | 124 | 29,149 | 7,959 | ... | ... | 3 | 13 | 1,768,549 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated .. .. .. | 155,331 | 22,783 | 465 | 14,891 | ... | 170 | ... | 14 | 4,865 | 967 | ... | ... | ... | ... | 199,486 |
| | | Total .. | 1,510,010 | 234,768 | 6,795 | 172,402 | 4 | 915 | 46 | 138 | 34,014 | 8,926 | ... | ... | 3 | 13 | 1,968,034 |
| 14 | Dhárwár ... | Rayatwári .. .. .. | 584,159 | 4,701 | 136,685 | 281,478 | 12 | 29 | 8 | 41,073 | 81,641 | 26,499 | ... | ... | ... | ... | 1,156,285 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated . .. .. | 36,381 | 336 | 17,558 | 10,799 | ... | 2 | ... | 4,739 | 5,190 | 2,157 | ... | ... | 1 | ... | 77,163 |
| | | Total .. | 620,540 | 5,037 | 154,243 | 292,277 | 12 | 31 | 8 | 45,812 | 86,831 | 28,656 | ... | ... | 1 | ... | 1,233,448 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Rayatwári .. .. .. | 7 | ... | 323,571 | 128 | ... | 69 | 13,205 | 71,560 | ... | 32,088 | ... | ... | ... | ... | 440,628 |
| | | Other Government .. .. | ... | ... | 5,679 | ... | ... | ... | ... | 456 | ... | 194 | ... | ... | ... | ... | 6,329 |
| | | Alienated .. .. .. | ... | ... | 7,474 | ... | ... | ... | 35 | 296 | ... | 194 | ... | ... | ... | ... | 7,999 |
| | | Total ... | 7 | ... | 336,724 | 128 | ... | 69 | 13,240 | 72,312 | ... | 32,476 | ... | ... | ... | ... | 454,956 |
| 16 | Kolába ... ... | Rayatwári .. .. .. | ... | ... | 140,038 | ... | ... | ... | 2,604 | 14,073 | ... | 11,101 | ... | ... | ... | ... | 167,816 |
| | | Other Government .. .. | ... | ... | 56,379 | ... | ... | ... | 16,004 | 42,155 | ... | 33,002 | ... | ... | ... | ... | 147,540 |
| | | Alienated .. .. .. | ... | ... | 895 | ... | ... | ... | ... | 23 | ... | 17 | ... | ... | ... | ... | 935 |
| | | Total ... | ... | ... | 197,312 | ... | ... | ... | 18,608 | 56,251 | ... | 44,120 | ... | ... | ... | ... | 316,291 |
| 17 | Ratnágiri ... | Rayatwári .. .. .. | ... | ... | 12,391 | ... | ... | ... | 6,732 | 7,186 | ... | 4,492 | ... | ... | ... | ... | 30,801 |
| | | Other Government .. .. | ... | ... | 23,352 | ... | ... | ... | 15,368 | 20,361 | ... | 12,181 | ... | ... | ... | 53 | 71,315 |
| | | Alienated .. .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | ... | ... | 35,743 | ... | ... | ... | 22,100 | 27,547 | ... | 16,673 | ... | ... | .. | 53 | 102,116 |
| 18 | Kánara ... ... | Rayatwári .. .. .. | 1,055 | ... | 196,189 | ... | ... | 11 | ... | 5,257 | 121 | 342 | ... | ... | ... | ... | 202,975 |
| | | Other Government .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated .. .. .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 1,055 | ... | 196,189 | ... | ... | 11 | ... | 5,257 | 121 | 342 | ... | ... | ... | ... | 202,975 |
| | Total A ... | Rayatwári .. .. .. | 7,294,576 | 3,903,951 | 1,403,018 | 1,690,177 | 26,638 | 109,798 | 167,512 | 561,828 | 209,039 | 251,065 | 26,420 | 16,225 | 2,065 | 18,649 | 15,680,961 |
| | | Other Government .. .. | 157,630 | 160,548 | 127,585 | 84,639 | 3,841 | 16,376 | 82,480 | 78,472 | 263 | 49,844 | 18,799 | 869 | 46 | 547 | 781,939 |
| | | Alienated .. .. .. | 869,926 | 384,857 | 60,304 | 137,987 | 1,500 | 9,980 | 2,901 | 41,675 | 32,955 | 23,390 | 2,810 | 1,457 | 201 | 2,079 | 1,572,022 |
| | | Total ... | 8,322,132 | 4,449,356 | 1,590,907 | 1,912,803 | 31,979 | 136,154 | 252,893 | 681,975 | 242,257 | 324,299 | 48,029 | 18,551 | 2,312 | 21,275 | 18,034,922 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 79,763 | 29,567 | 184,178 | 45,008 | 11,662 | 968 | ... | 1,190 | 65 | 64 | ... | ... | ... | ... | 352,465 |
| 20 | Hyderabad ... ... ... ... ... | | 100,637 | 289,802 | 176,324 | 46,287 | 5,505 | 314 | ... | 26 | 31 | 354 | ... | ... | ... | ... | 619,280 |
| 21 | Shikárpur ... ... ... ... ... | | 193,568 | 15,096 | 257,367 | 270,897 | 5,002 | 3 | ... | 63 | 471 | 12 | ... | ... | ... | 434 | 742,913 |
| 22 | Upper Sind Frontier ... ... ... | | 80,278 | 12,828 | 7,342 | 16,923 | 503 | 16 | ... | 1 | 435 | ... | ... | ... | ... | 167 | 118,493 |
| 23 | Thar and Párkar ... .. ... ... | | 8,204 | 402,240 | 80,946 | 26,660 | 388 | 2 | ... | ... | ... | 16 | ... | ... | ... | ... | 518,456 |
| | | Total B ... | 462,450 | 749,533 | 706,157 | 405,775 | 23,060 | 1,303 | ... | 1,280 | 1,002 | 446 | ... | ... | ... | 601 | 2,351,607 |
| | | Grand Total ... | 8,784,582 | 5,198,889 | 2,297,064 | 2,318,578 | 55,039 | 137,457 | 252,893 | 683,255 | 243,259 | 324,745 | 48,029 | 18,551 | 2,312 | 21,876 | 20,386,529 |

## III.—Crops, 1890-91—*continued.*

| No. | Districts. | II.—Pulses. Tur (Pigeon Pea), Cajanus Indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram), Phaseolus radiatus. | Math (Kidney Bean), Phaseolus aconitifolius. | Val (large fruited Dolichos), Dolichos lablab. | Chavli (small-fruited Dolichos), Dolichos catiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lákh Láng), Lathyrus sativus. | Field Vetch (Guvar), Cyamopsis psoralioides. | Others. | Total II. | III.—Orchard and Garden Produce. A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | IV.—Drugs and Narcotics. Tobacco (Tambákhu), Nicotiana tabacum. | Bháng, Gánja (Indian hemp), Cannabis sativa. | Opium (Afu), Papaver somniferum. | Coffee (Kofi, Bund), Coffea Arabica. | Tea (Chaha), Thea sinensis. | Cinchona officinalis. | Others. | Total IV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadábad ... Rayatwári ... | 2,644 | 4,148 | 4,705 | 2,239 | 28,340 | 34 | 367 | 148 | ... | ... | ... | 4,269 | ... | 46,894 | 486 | 1,681 | 210 | 972 | 3,349 | 3,744 | ... | ... | ... | ... | ... | ... | 3,744 |
| | Other Government | 384 | 5,825 | 6,377 | 3,196 | 17,476 | 126 | 1,021 | 4,004 | ... | ... | ... | 3,548 | ... | 41,957 | 215 | 714 | 3,324 | 12 | 4,265 | 410 | ... | ... | ... | ... | ... | ... | 410 |
| | Alienated ... | 1 | 312 | 420 | 236 | 539 | ... | 40 | 134 | ... | ... | ... | 247 | ... | 1,929 | 2 | 40 | ... | 1 | 43 | 21 | ... | ... | ... | ... | ... | ... | 21 |
| | Total ... | 3,029 | 10,285 | 11,502 | 5,671 | 46,355 | 160 | 1,428 | 4,286 | ... | ... | ... | 8,064 | ... | 90,780 | 703 | 2,435 | 3,534 | 985 | 7,657 | 4,175 | ... | ... | ... | ... | ... | ... | 4,175 |
| 2 | Kaira ... Rayatwári ... | 17,526 | 4,306 | 4,294 | 1,131 | 24,069 | 662 | 4,678 | ... | ... | ... | ... | 8,103 | ... | 64,769 | 361 | 661 | 3,981 | 163 | 5,166 | 9,730 | ... | ... | ... | ... | ... | ... | 9,730 |
| | Other Government | 8,804 | 303 | 545 | 165 | 5,932 | 186 | 188 | ... | ... | ... | ... | 2,882 | ... | 19,005 | 139 | 259 | 875 | 45 | 1,318 | 11,831 | ... | ... | ... | ... | ... | ... | 11,831 |
| | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total ... | 26,330 | 4,609 | 4,839 | 1,296 | 30,001 | 848 | 4,866 | ... | ... | ... | ... | 10,985 | ... | 83,774 | 500 | 920 | 4,856 | 208 | 6,484 | 21,561 | ... | ... | ... | ... | ... | ... | 21,561 |
| 3 | Panch Maháls ... Rayatwári ... | 4,614 | 35,211 | 1,804 | 5,129 | 1,673 | 79 | 183 | 77 | 990 | ... | ... | 612 | ... | 50,372 | 157 | 171 | 373 | 22 | 723 | 687 | ... | ... | ... | ... | ... | ... | 687 |
| | Other Government | 1,340 | 4,034 | 872 | 1,758 | 940 | 39 | 265 | ... | 1,270 | ... | ... | 153 | ... | 10,671 | 190 | 42 | 19 | 2 | 253 | 132 | ... | ... | ... | ... | ... | ... | 132 |
| | Alienated ... | 937 | 1,419 | 426 | 385 | 607 | 33 | 102 | ... | 60 | ... | ... | 132 | ... | 4,101 | 5 | ... | 38 | ... | 43 | 88 | ... | ... | ... | ... | ... | ... | 88 |
| | Total ... | 6,891 | 40,664 | 3,102 | 7,272 | 3,220 | 151 | 550 | 77 | 2,320 | ... | ... | 897 | ... | 65,144 | 352 | 213 | 430 | 24 | 1,019 | 907 | ... | ... | ... | ... | ... | ... | 907 |
| 4 | Broach ... Rayatwári ... | 13,592 | 782 | 315 | 20 | 3,176 | 805 | 159 | ... | 558 | ... | 34,082 | 254 | ... | 53,743 | 221 | 1,274 | 23,682 | 393 | 25,570 | 3,408 | ... | ... | ... | ... | ... | ... | 3,408 |
| | Other Government | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 116 | ... | ... | 119 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Total ... | 13,595 | 782 | 315 | 20 | 3,176 | 805 | 159 | ... | 558 | ... | 34,198 | 254 | ... | 53,862 | 221 | 1,274 | 23,682 | 393 | 25,570 | 3,408 | ... | ... | ... | ... | ... | ... | 3,408 |
| 5 | Surat ... Rayatwári ... | 23,674 | 2,444 | 3,023 | 3,046 | 359 | 45,062 | 722 | ... | 3,885 | 5 | 4,012 | 1,815 | ... | 88,047 | 336 | 1,775 | ... | 72 | 2,839 | 860 | 10 | ... | ... | ... | ... | ... | 870 |
| | Other Government | 254 | 2 | 62 | 1 | 1 | 401 | 9 | ... | 28 | ... | 27 | 9 | ... | 794 | ... | 7 | ... | 2 | 9 | 11 | ... | ... | ... | ... | ... | ... | 11 |
| | Alienated ... | 29 | 1 | 14 | 18 | 2 | 29 | 2 | ... | ... | ... | 10 | 6 | ... | 111 | ... | 12 | ... | 1 | 13 | 3 | ... | ... | ... | ... | ... | ... | 3 |
| | Total ... | 23,957 | 2,447 | 3,099 | 3,065 | 362 | 45,492 | 733 | ... | 3,913 | 5 | 4,049 | 1,830 | ... | 88,952 | 336 | 1,794 | ... | 731 | 2,861 | 874 | 10 | ... | ... | ... | ... | ... | 884 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... Rayatwári ... | 59,773 | 31,716 | 4,826 | 20,107 | 2,987 | 153 | 1,228 | 56,288 | 2,563 | 644 | 110 | ... | ... | 180,395 | 1,781 | 3,202 | 261 | 2,323 | 7,567 | 7,207 | 39 | ... | ... | ... | ... | ... | 7,246 |
| | Other Government | 2,521 | 4,656 | ... | 357 | ... | ... | ... | 167 | 15 | 32 | ... | ... | ... | 7,748 | 3 | 3 | ... | ... | 6 | 14 | ... | ... | ... | ... | ... | ... | 14 |
| | Alienated ... | 2,774 | 1,656 | 85 | 653 | 70 | 16 | 21 | 220 | 26 | 20 | ... | ... | ... | 5,550 | 336 | 274 | ... | 244 | 854 | 369 | ... | ... | ... | ... | ... | ... | 369 |
| | Total ... | 65,068 | 38,028 | 4,911 | 21,117 | 3,057 | 169 | 1,249 | 56,684 | 2,604 | 696 | 110 | ... | ... | 193,693 | 2,120 | 3,479 | 261 | 2,567 | 8,427 | 7,590 | 39 | ... | ... | ... | ... | ... | 7,629 |
| 7 | Násik ... Rayatwári ... | 25,116 | 73,769 | 850 | 22,894 | 1,066 | 8 | 18 | 62,763 | 2,245 | 8,083 | 3,502 | ... | ... | 200,314 | 3,258 | 3,273 | 767 | 1,884 | 9,182 | 2,240 | 10 | ... | ... | ... | ... | ... | 2,250 |
| | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Alienated ... | 2,014 | 6,675 | 167 | 788 | 4 | ... | ... | 2,202 | 173 | 1,069 | 315 | ... | ... | 13,437 | 917 | 286 | 40 | 123 | 1,366 | 199 | ... | ... | ... | ... | ... | ... | 199 |
| | Total ... | 27,130 | 80,444 | 1,017 | 23,682 | 1,070 | 8 | 18 | 64,965 | 2,418 | 9,152 | 3,847 | ... | ... | 213,751 | 4,175 | 3,559 | 807 | 2,007 | 10,548 | 2,439 | 10 | ... | ... | ... | ... | ... | 2,449 |
| 8 | Ahmadnagar ... Rayatwári ... | 28,259 | 100,279 | 7,565 | 2,482 | 11,670 | 821 | 58 | 27,472 | 1,250 | 506 | 73 | ... | 405 | 180,849 | 2,450 | 1,166 | 1,537 | 1,354 | 6,507 | 8,144 | 480 | ... | ... | ... | ... | 4 | 8,628 |
| | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Alienated ... | 3,966 | 12,899 | 278 | ... | 1,281 | 4 | ... | 3,751 | 18 | ... | ... | ... | ... | 22,197 | 164 | 89 | 51 | 155 | 459 | 802 | 125 | ... | ... | ... | ... | ... | 927 |
| | Total .. | 32,225 | 113,178 | 7,843 | 2,482 | 12,951 | 825 | 58 | 31,223 | 1,277 | 506 | 73 | ... | 405 | 203,046 | 2,614 | 1,255 | 1,588 | 1,509 | 6,966 | 8,946 | 605 | ... | ... | ... | ... | 4 | 9,555 |
| 9 | Poona ... Rayatwári ... | 21,335 | 70,908 | 1,518 | 3,027 | 19,276 | 3,996 | 322 | 22,586 | 1,564 | 1,216 | 70 | ... | ... | 145,818 | 8,664 | 1,768 | 2,099 | 2,805 | 15,336 | 1,339 | 17 | ... | ... | ... | ... | ... | 1,356 |
| | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Alienated ... | 6,368 | 17,225 | 197 | 1,136 | 2,710 | 517 | ... | 4,913 | 331 | 86 | ... | ... | ... | 33,483 | 2,132 | 526 | 335 | 726 | 3,719 | 39 | ... | ... | ... | ... | ... | ... | 39 |
| | Total ... | 27,703 | 88,133 | 1,715 | 4,163 | 21,986 | 4,513 | 322 | 27,499 | 1,895 | 1,302 | 70 | ... | ... | 179,301 | 10,796 | 2,294 | 2,434 | 3,531 | 19,055 | 1,378 | 17 | ... | ... | ... | ... | ... | 1,395 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Sholápur ... | Rayatwári ... | 45,191 | 6,542 | 2,857 | 817 | 12,043 | 48 | 15 | 4,701 | 67 | 43 | 288 | ... | 2 | 130,614 | 3,076 | 1,374 | 369 | 1,447 | 6,266 | 3,289 | 48 | ... | ... | ... | ... | ... | 3,337 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 2,955 | 5,466 | 92 | 15 | 1,097 | 2 | ... | 384 | 1 | ... | 18 | ... | ... | 10,030 | 194 | 84 | 84 | 64 | 426 | 163 | ... | ... | ... | ... | ... | ... | 163 |
| | | Total ... | 48,146 | 70,008 | 2,949 | 832 | 13,140 | 50 | 15 | 5,085 | 68 | 43 | 306 | ... | 2 | 140,644 | 3,270 | 1,458 | 453 | 1,511 | 6,692 | 3,452 | 48 | ... | ... | ... | ... | ... | 3,500 |
| 10 | Sátára ... | Rayatwári ... | 52,896 | 71,354 | 10,342 | 24,433 | 53,803 | 2,980 | 475 | 37,647 | 1,386 | 544 | ... | ... | 1 | 255,861 | 5,937 | 910 | 947 | 1,273 | 9,067 | 9,361 | 459 | ... | 13 | ... | ... | ... | 9,833 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 11,847 | 15,792 | 2,512 | 6,879 | 6,771 | 922 | 271 | 7,020 | 536 | 190 | ... | ... | 1 | 52,744 | 1,430 | 331 | 334 | 330 | 2,425 | 1,110 | 12 | ... | ... | ... | ... | ... | 1,122 |
| | | Total ... | 64,743 | 87,146 | 12,854 | 31,312 | 60,574 | 3,902 | 749 | 44,667 | 1,922 | 734 | ... | ... | 2 | 308,605 | 7,367 | 1,241 | 1,281 | 1,603 | 11,492 | 10,471 | 471 | ... | 13 | ... | ... | ... | 10,955 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Belgaum ... | Rayatwári ... | 44,793 | 42,149 | 5,427 | 1,903 | 3,018 | 5,982 | 213 | 40,547 | 5,525 | 5,301 | ... | ... | ... | 154,858 | 5,101 | 2,065 | 56 | 2,364 | 7,586 | 20,989 | ... | ... | 51 | ... | ... | ... | 21,040 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 12,479 | 10,480 | 2,646 | 379 | 1,085 | 892 | 66 | 9,358 | 292 | 364 | ... | ... | ... | 38,041 | 999 | 405 | 50 | 472 | 1,926 | 5,322 | ... | ... | ... | ... | ... | ... | 5,322 |
| | | Total ... | 57,272 | 52,629 | 8,073 | 2,282 | 4,103 | 6,874 | 279 | 49,905 | 5,817 | 5,665 | ... | ... | ... | 192,899 | 4,100 | 2,470 | 106 | 2,836 | 9,512 | 26,311 | ... | ... | 51 | ... | ... | ... | 26,362 |
| 12 | Bijápur ... | Rayatwári ... | 54,658 | 57,298 | 21,501 | 6 | 4,523 | 3,566 | 2,621 | 25,489 | 44 | ... | ... | ... | ... | 169,706 | 1,192 | 1,160 | 172 | 2,218 | 4,742 | 2,691 | 1 | ... | ... | ... | ... | ... | 2,692 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 7,817 | 4,507 | 3,223 | ... | 425 | 573 | 369 | 4,118 | 3 | ... | ... | ... | ... | 21,035 | 161 | 131 | 22 | 286 | 600 | 191 | ... | ... | ... | ... | ... | ... | 191 |
| | | Total ... | 62,475 | 61,805 | 24,724 | 6 | 4,948 | 4,139 | 2,990 | 29,607 | 47 | ... | ... | ... | ... | 190,741 | 1,353 | 1,291 | 194 | 2,504 | 5,342 | 2,882 | 1 | ... | ... | ... | ... | ... | 2,883 |
| 13 | Dhárwár ... | Rayatwári ... | 52,063 | 46,642 | 38,917 | 2,562 | 9,348 | 5,594 | 702 | 41,650 | 465 | 84 | ... | ... | ... | 198,027 | 2,234 | 3,763 | 2 | 3,858 | 9,857 | 1,897 | ... | ... | ... | ... | ... | ... | 1,897 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 3,376 | 1,727 | 2,577 | 178 | 343 | 598 | 147 | 2,650 | 79 | 2 | ... | ... | ... | 11,677 | 110 | 441 | ... | 465 | 1,016 | 108 | ... | ... | ... | ... | ... | ... | 108 |
| | | Total ... | 55,439 | 48,369 | 41,494 | 2,740 | 9,691 | 6,192 | 849 | 44,300 | 544 | 86 | ... | ... | ... | 209,704 | 2,344 | 4,204 | 2 | 4,323 | 10,873 | 2,005 | ... | ... | ... | ... | ... | ... | 2,005 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Thána ... | Rayatwári ... | 7,627 | 2,611 | 696 | 21,912 | ... | 4,390 | 4,444 | 1,052 | 161 | ... | 111 | ... | ... | 43,004 | 879 | 916 | 243 | 3,283 | 5,321 | 6 | ... | ... | ... | ... | ... | ... | 6 |
| | | Other Government ... | 2 | 7 | 4 | 167 | ... | 19 | 22 | 1 | ... | ... | ... | ... | ... | 222 | 4 | 15 | ... | 129 | 148 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 53 | ... | ... | 75 | ... | 16 | 1 | ... | ... | ... | ... | ... | ... | 145 | 21 | 29 | 6 | 202 | 258 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 7,682 | 2,618 | 700 | 22,154 | ... | 4,425 | 4,467 | 1,053 | 161 | ... | 111 | ... | ... | 43,371 | 904 | 960 | 249 | 3,614 | 5,727 | 6 | ... | ... | ... | ... | ... | ... | 6 |
| 15 | Kolába ... | Rayatwári ... | 569 | 2,354 | 935 | 1,531 | ... | 4,394 | 41 | ... | ... | ... | ... | ... | ... | 9,824 | 77 | 319 | 1 | 2,383 | 2,780 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government... | 1,431 | 381 | 1,360 | 5,946 | ... | 3,082 | 39 | ... | 4 | ... | ... | ... | ... | 12,243 | 7 | 167 | ... | 2 | 176 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 17 | ... | ... | ... | 25 | ... | ... | ... | ... | ... | ... | ... | 42 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 2,000 | 2,752 | 2,295 | 7,477 | ... | 7,501 | 80 | ... | 4 | ... | ... | ... | ... | 22,109 | 84 | 486 | 1 | 2,385 | 2,956 | ... | ... | ... | ... | ... | ... | ... | ... |
| 16 | Ratnágiri ... | Rayatwári ... | 1 | ... | 42 | 513 | ... | 346 | 5 | 1,890 | ... | ... | ... | ... | 168 | 2,965 | ... | 1 | ... | 2,613 | 2,614 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| | | Other Government... | 484 | 39 | 121 | 1,015 | ... | 2,265 | 32 | 228 | ... | ... | ... | ... | 47 | 4,231 | 1 | 35 | 1,404 | 661 | 2,101 | ... | ... | ... | ... | ... | ... | 22 | 22 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 485 | 39 | 163 | 1,528 | ... | 2,611 | 37 | 2,118 | ... | ... | ... | ... | 215 | 7,196 | 1 | 36 | 1,404 | 3,274 | 4,715 | 1 | ... | ... | ... | ... | ... | 22 | 23 |
| 17 | Kánara ... | Rayatwári ... | 139 | 312 | 1,325 | 1,643 | 1 | 74 | 286 | 1,689 | 365 | 4 | ... | ... | 1 | 5,839 | 256 | 558 | 4,780 | 17,672 | 23,266 | 1 | ... | ... | 27 | ... | ... | ... | 28 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 139 | 312 | 1,325 | 1,643 | 1 | 74 | 286 | 1,689 | 365 | 4 | ... | ... | 1 | 5,839 | 256 | 558 | 4,780 | 17,672 | 23,266 | 1 | ... | ... | 27 | ... | ... | ... | 28 |
| | Total A. ... | Rayatwári ... | 454,470 | 610,825 | 110,942 | 115,395 | 175,352 | 78,994 | 16,537 | 323,999 | 21,077 | 16,430 | 42,248 | 15,053 | 577 | 1,981,899 | 34,466 | 26,037 | 39,480 | 47,755 | 147,738 | 75,594 | 1,064 | ... | 91 | ... | ... | 4 | 76,753 |
| | | Other Government... | 15,223 | 15,247 | 9,341 | 12,605 | 24,349 | 6,118 | 1,576 | 4,400 | 1,317 | 32 | 143 | 6,592 | 47 | 96,990 | 559 | 1,242 | 5,622 | 853 | 8,276 | 12,398 | ... | ... | ... | ... | ... | 22 | 12,420 |
| | | Alienated ... | 54,616 | 78,176 | 12,637 | 10,742 | 14,934 | 3,627 | 1,022 | 34,759 | 1,519 | 1,731 | 373 | 385 | 1 | 214,522 | 6,471 | 2,648 | 960 | 3,069 | 13,148 | 8,415 | 137 | ... | ... | ... | ... | ... | 8,552 |
| | | Total .. | 524,309 | 704,248 | 132,920 | 138,742 | 214,635 | 88,739 | 19,135 | 363,158 | 23,913 | 18,193 | 42,764 | 22,030 | 625 | 2,293,411 | 41,496 | 29,927 | 46,062 | 51,677 | 169,162 | 96,407 | 1,201 | ... | 91 | ... | ... | 26 | 97,725 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Karáchi ... | ... | ... | 2,927 | 17,700 | 2,367 | 2,144 | ... | 24 | ... | ... | ... | 10,631 | ... | ... | 35,793 | 1,712 | 2,824 | 4,043 | 2,078 | 10,657 | 246 | 61 | ... | ... | ... | ... | ... | 307 |
| | Hyderabad ... | ... | ... | 2,250 | 3,004 | 34 | ... | ... | 1,535 | ... | ... | ... | 15,700 | ... | 75 | 22,598 | 2,319 | 5,268 | 14,326 | 4,311 | 26,224 | 5,504 | 17 | ... | ... | ... | ... | ... | 5,521 |
| | Shikárpur ... | ... | ... | 22,037 | 826 | 376 | ... | ... | 21 | ... | ... | ... | 85,733 | 3 | 46 | 109,042 | 2,151 | 5,493 | 1,849 | 3,789 | 13,282 | 2,003 | 133 | ... | ... | ... | ... | 3 | 2,139 |
| | Upper Sind Frontier | ... | ... | 2,020 | 761 | 20 | ... | ... | 91 | ... | ... | ... | 4,629 | ... | 382 | 7,903 | 110 | 927 | 7 | 69 | 1,113 | 28 | ... | ... | ... | ... | ... | ... | 28 |
| | Thar and Párkar ... | ... | 2 | ... | 8,443 | ... | ... | ... | 448 | ... | ... | ... | 9 | 41 | ... | 8,943 | 156 | 187 | 18 | 88 | 449 | 204 | ... | ... | ... | ... | ... | ... | 204 |
| | | Total B. ... | 2 | 29,234 | 30,734 | 2,797 | 2,144 | ... | 2,119 | ... | ... | ... | 116,702 | 44 | 503 | 184,279 | 6,448 | 14,699 | 20,243 | 10,335 | 51,725 | 7,985 | 211 | ... | ... | ... | ... | 3 | 8,199 |
| | | Grand Total ... | 524,311 | 733,482 | 163,654 | 141,539 | 216,779 | 88,739 | 21,254 | 363,158 | 23,913 | 18,193 | 159,466 | 22,074 | 1,128 | 2,477,690 | 47,944 | 44,626 | 66,305 | 62,012 | 220,887 | 104,392 | 1,412 | ... | 91 | ... | ... | 29 | 105,924 |

# III.—Crops, 1890-91—*continued.*

| No. | District. | | V.—Condiments and Spices. | | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Cardamom (Veldode), Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (Ale), Zingiber officinale. | Black Pepper (Miri) Piper nigrum. | Betel-leaves (Páne), Piper-betel. | Betelnut (Supári), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bálant-shep) Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jire), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Ráí), Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us, Sherdi,) Saccharum officinarum. | Others. | Total VII. |
| | 1 | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| 1 | Ahmadabad | Rayatwári | ... | 1,910 | 211 | ... | ... | ... | 4 | 268 | ... | ... | 13 | ... | 802 | 8 | 50 | ... | 3,266 | ... | ... | ... | 1,040 | ... | 1,040 |
| | | Other Government | ... | 349 | ... | ... | ... | ... | ... | 50 | ... | ... | ... | ... | 21 | ... | 1 | ... | 421 | ... | ... | ... | 751 | ... | 751 |
| | | Alienated | ... | 96 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 97 | ... | ... | ... | 1 | ... | 1 |
| | | Total | ... | 2,355 | 211 | ... | ... | ... | 4 | 319 | ... | ... | 13 | ... | 823 | 8 | 51 | ... | 3,784 | ... | ... | ... | 1,792 | ... | 1,792 |
| 2 | Kaira | Rayatwári | ... | 912 | 69 | ... | ... | ... | 8 | 215 | ... | 1 | 586 | 2 | 129 | 9 | 45 | 234 | 2,210 | ... | ... | ... | 234 | ... | 234 |
| | | Other Government | ... | 251 | 37 | ... | ... | ... | 2 | 1 | ... | ... | 1,127 | 3 | 18 | ... | 62 | 29 | 1,530 | ... | ... | ... | 215 | ... | 215 |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Total | ... | 1,163 | 106 | ... | ... | ... | 10 | 216 | ... | 1 | 1,713 | 5 | 147 | 9 | 107 | 263 | 3,740 | ... | ... | ... | 449 | ... | 449 |
| 3 | Panch Maháls | Rayatwári | ... | 474 | 14 | ... | ... | ... | 1 | ... | 63 | 1 | 62 | ... | 34 | ... | 31 | ... | 680 | ... | ... | ... | 190 | ... | 190 |
| | | Other Government | ... | 164 | 1 | ... | ... | ... | ... | ... | ... | 9 | ... | ... | 11 | ... | 44 | ... | 229 | ... | ... | ... | 25 | ... | 25 |
| | | Alienated | ... | 8 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | 10 | ... | ... | ... | 10 | ... | 10 |
| | | Total | ... | 646 | 15 | ... | ... | ... | 1 | ... | 63 | 11 | 62 | ... | 45 | ... | 76 | ... | 919 | ... | ... | ... | 225 | ... | 225 |
| 4 | Broach | Rayatwári | ... | 150 | 18 | ... | ... | ... | 19 | ... | 34 | 36 | ... | ... | 22 | 5 | 47 | 10 | 341 | ... | ... | ... | 58 | ... | 58 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Total | ... | 150 | 18 | ... | ... | ... | 19 | ... | 34 | 36 | ... | ... | 22 | 5 | 47 | 10 | 341 | ... | ... | ... | 58 | ... | 58 |
| 5 | Surat | Rayatwári | ... | 669 | 115 | ... | ... | ... | 96 | ... | 21 | 4 | ... | 91 | 320 | 73 | 138 | 34 | 1,561 | ... | ... | ... | 4,978 | ... | 4,978 |
| | | Other Government | ... | 28 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 29 | ... | ... | ... | 62 | ... | 62 |
| | | Alienated | ... | 24 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 24 | ... | ... | ... | 7 | ... | 7 |
| | | Total | ... | 721 | 115 | ... | ... | ... | 96 | ... | 21 | 4 | ... | 91 | 321 | 73 | 138 | 34 | 1,614 | ... | ... | ... | 5,047 | ... | 5,047 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh | Rayatwári | ... | 7,305 | 3 | ... | 277 | ... | 61 | 1,190 | 4,954 | 9,675 | ... | 1,131 | 283 | 246 | 177 | ... | 25,302 | ... | ... | ... | 1,403 | ... | 1,403 |
| | | Other Government | ... | 7 | ... | ... | ... | ... | ... | 5 | 35 | ... | ... | ... | ... | ... | ... | ... | 47 | ... | ... | ... | 6 | ... | 6 |
| | | Alienated | ... | 76 | ... | ... | 11 | ... | 41 | 65 | 29 | 61 | ... | 44 | 13 | 114 | 140 | ... | 594 | ... | ... | ... | 130 | ... | 130 |
| | | Total | ... | 7,388 | 3 | ... | 288 | ... | 102 | 1,260 | 5,018 | 9,736 | ... | 1175 | 296 | 360 | 317 | ... | 25,943 | ... | ... | ... | 1,539 | ... | 1,539 |
| 7 | Násik | Rayatwári | ... | 4,188 | 13 | ... | 139 | 1 | 18 | 16 | ... | 7 | ... | ... | 1,018 | 9 | 475 | ... | 5,884 | ... | ... | ... | 5,704 | ... | 5,704 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | 369 | 2 | ... | 29 | ... | ... | ... | ... | ... | ... | ... | 5 | 27 | 26 | ... | 458 | ... | ... | ... | 613 | ... | 613 |
| | | Total | ... | 4,557 | 15 | ... | 168 | 1 | 18 | 16 | ... | 7 | ... | ... | 1023 | 36 | 501 | ... | 6,342 | ... | ... | ... | 6,317 | ... | 6,317 |
| 8 | Ahmadnagar | Rayatwári | ... | 4,962 | ... | ... | 372 | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | 169 | 1 | 5,506 | ... | ... | ... | 2,572 | ... | 2,572 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | 534 | ... | ... | 30 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 4 | ... | 569 | ... | ... | ... | 186 | ... | 186 |
| | | Total | ... | 5,496 | ... | ... | 402 | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | 173 | 1 | 6,075 | ... | ... | ... | 2,758 | ... | 2,758 |
| 9 | Poona | Rayatwári | ... | 7,763 | 3 | ... | 454 | ... | 31 | ... | ... | 540 | ... | 5 | 11 | 16 | 732 | ... | 9,555 | ... | ... | ... | 6,410 | ... | 6,410 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | 1,646 | ... | ... | 513 | ... | 3 | ... | ... | 5 | ... | ... | ... | ... | 209 | ... | 2,376 | ... | ... | ... | 965 | ... | 965 |
| | | Total | ... | 9,409 | 3 | ... | 967 | ... | 34 | ... | ... | 545 | ... | 5 | 11 | 16 | 941 | ... | 11,931 | ... | ... | ... | 7,375 | ... | 7,375 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 7,431 | ... | ... | 294 | ... | 739 | 2 | 1 | 166 | ... | 3 | 4 | ... | 113 | ... | 8,753 | ... | ... | ... | 2,970 | ... | 2,970 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 427 | ... | ... | ... | 1 | ... | ... | ... | 34 | ... | ... | ... | ... | ... | ... | 462 | ... | ... | ... | 182 | ... | 182 |
| | | Total | 7,858 | ... | ... | 294 | 1 | 739 | 2 | 1 | 200 | ... | 3 | 4 | ... | 113 | ... | 9,215 | ... | ... | ... | 3,152 | ... | 3,152 |
| 11 | Sátára | Rayatwári | 10,456 | 47 | ... | 350 | 4 | 2,011 | 176 | ... | 466 | ... | 39 | 62 | 1 | 726 | 1 | 14,339 | ... | ... | ... | 10,415 | ... | 10,415 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 2,994 | 67 | ... | 79 | ... | 548 | 23 | ... | 139 | ... | 14 | ... | ... | 89 | 2 | 3,955 | ... | ... | ... | 3,018 | ... | 3,018 |
| | | Total | 13,450 | 114 | ... | 429 | 4 | 2,559 | 199 | ... | 605 | ... | 53 | 62 | 1 | 815 | 3 | 18,294 | ... | ... | ... | 13,433 | ... | 13,433 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 13,904 | ... | ... | 119 | 4 | 142 | 45 | ... | 1,230 | ... | ... | 112 | 126 | 1,226 | ... | 16,908 | ... | ... | ... | 8,161 | ... | 8,161 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 3,147 | ... | ... | 101 | 1 | 50 | 27 | ... | 616 | ... | ... | 3 | 3 | 322 | ... | 4,270 | ... | ... | ... | 2,855 | ... | 2,855 |
| | | Total | 17,051 | ... | ... | 220 | 5 | 192 | 72 | ... | 1,846 | ... | ... | 115 | 129 | 1,548 | ... | 21,178 | ... | ... | ... | 11,016 | ... | 11,016 |
| 13 | Bijápur | Rayatwári | 2,700 | ... | ... | 66 | ... | 6 | 3 | ... | 22 | ... | ... | 2 | 4 | 153 | ... | 2,956 | ... | ... | ... | 967 | ... | 967 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 353 | ... | ... | 4 | ... | 1 | ... | ... | 3 | ... | ... | ... | ... | 24 | ... | 385 | ... | ... | ... | 116 | ... | 116 |
| | | Total | 3,053 | ... | ... | 70 | ... | 7 | 3 | ... | 25 | ... | ... | 2 | 4 | 177 | ... | 3,341 | ... | ... | ... | 1,083 | ... | 1,083 |
| 14 | Dhárwár | Rayatwári | 51,713 | 6 | ... | 1,286 | 514 | 32 | 4 | 2 | 182 | ... | 89 | 189 | 154 | 1,109 | ... | 55,280 | ... | ... | ... | 3,758 | ... | 3,758 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | 1,844 | ... | ... | 61 | 50 | ... | 3 | ... | 1 | ... | ... | ... | 3 | ... | ... | 1,962 | ... | ... | ... | 430 | ... | 430 |
| | | Total | 53,557 | 6 | ... | 1,347 | 564 | 32 | 7 | 2 | 183 | ... | 89 | 189 | 157 | 1,109 | ... | 57,242 | ... | ... | ... | 4,188 | ... | 4,188 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 294 | 254 | ... | 188 | 4 | 32 | ... | ... | 623 | ... | ... | ... | 19 | 12 | ... | 1,426 | ... | ... | ... | 1,340 | ... | 1,340 |
| | | Other Government | 21 | ... | ... | ... | ... | ... | ... | ... | 21 | ... | ... | ... | ... | ... | ... | 42 | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 315 | 254 | ... | 188 | 4 | 32 | ... | ... | 644 | ... | ... | ... | 19 | 12 | ... | 1,468 | ... | ... | ... | 1,340 | ... | 1,340 |
| 16 | Kolába | Rayatwári | 45 | ... | ... | 20 | 274 | ... | ... | ... | 164 | ... | ... | ... | ... | ... | ... | 503 | ... | ... | ... | 43 | ... | 43 |
| | | Other Government | 3 | ... | ... | ... | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | 6 | ... | ... | ... | 12 | ... | 12 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 48 | ... | ... | 20 | 275 | ... | ... | ... | 166 | ... | ... | ... | ... | ... | ... | 509 | ... | ... | ... | 55 | ... | 55 |
| 17 | Ratnágiri | Rayatwári | 54 | ... | ... | ... | 375 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 429 | ... | ... | ... | 22 | ... | 22 |
| | | Other Government | 10 | ... | ... | ... | 316 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 326 | ... | ... | ... | 12 | ... | 12 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 64 | ... | ... | ... | 691 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 755 | ... | ... | ... | 34 | ... | 34 |
| 18 | Kánara | Rayatwári | 1,266 | 253 | 4 | 1,767 | 271 | 11,580 | 55 | ... | 3 | ... | ... | ... | 1 | 2 | 258 | 15,460 | ... | ... | ... | 3,424 | ... | 3,424 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total | 1,266 | 253 | 4 | 1,767 | 271 | 11,580 | 55 | ... | 3 | ... | ... | ... | 1 | 2 | 258 | 15,460 | ... | ... | ... | 3,424 | .. | 3,424 |
| | Total A. | Rayatwári | 1,266 | 115,183 | 757 | 1,767 | 3,836 | 12,756 | 3,256 | 1,919 | 13,121 | 661 | 1,360 | 2,988 | 671 | 5,205 | 538 | 170,359 | ... | ... | ... | 53,689 | ... | 53,689 |
| | | Other Government | ... | 833 | 38 | ... | ... | 317 | 2 | 56 | 32 | 1,127 | 3 | 51 | ... | 107 | 29 | 2,630 | ... | ... | ... | 1,083 | ... | 1,083 |
| | | Alienated | ... | 11,518 | 69 | ... | 828 | 53 | 643 | 119 | 860 | ... | 58 | 21 | 147 | 815 | 2 | 15,162 | ... | ... | ... | 8,513 | ... | 8,513 |
| | | Total | 1,266 | 127,534 | 864 | 1,767 | 4,664 | 13,126 | 3,901 | 2,094 | 5,139 | 14,013 | 1,788 | 1,421 | 3,060 | 818 | 6,127 | 569 | 188,151 | ... | ... | ... | 63,285 | ... | 63,285 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | ... | 49 | ... | ... | ... | ... | 3 | 26 | ... | 114 | 92 | 3 | ... | 40,411 | 77 | 18 | 40,793 | ... | 7 | 7 | 1,068 | ... | 1,068 |
| 20 | Hyderabad | | ... | 248 | ... | ... | ... | ... | ... | 1 | 7 | 64 | 11 | ... | ... | 1,086 | 76 | 4 | 1,497 | ... | 20 | 20 | 926 | ... | 926 |
| 21 | Shikárpur | | ... | 251 | ... | ... | ... | ... | ... | 21 | ... | 2,090 | 94 | 3 | ... | 711 | 63 | 16 | 3,249 | ... | 46 | 46 | 520 | ... | 520 |
| 22 | Upper Sind Frontier | | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | 208 | ... | ... | ... | ... | 1 | ... | 211 | ... | ... | ... | 4 | ... | 4 |
| 23 | Thar and Párkar | | ... | 43 | ... | ... | ... | ... | ... | ... | ... | 100 | ... | ... | ... | 7 | 5 | ... | 155 | ... | 18 | 18 | 14 | ... | 14 |
| | | Total B. | ... | 592 | ... | ... | ... | ... | 3 | 49 | 7 | 2,576 | 197 | 6 | ... | 42,215 | 222 | 38 | 45,905 | ... | 91 | 91 | 2,532 | ... | 2,532 |
| | | Grand Total | 1,266 | 128,126 | 864 | 1,767 | 4,664 | 13,126 | 3,904 | 2,143 | 5,146 | 16,589 | 1,985 | 1,427 | 3,060 | 43,033 | 6,349 | 607 | 234,056 | ... | 91 | 91 | 65,817 | ... | 65,817 |

## III.—Crops, 1890-91—*continued.*

| No. | District. | VIII.—Oil Seeds. Sesame (Til), Sesamum Indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Erandya), Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Niger-seed (Khurásni), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobare), Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli), Indigofera tinctoria. | Safflower (Kusumba), Carthamus persicus. | Morinda (Ál, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tág), Crotolaria juncea. | Hemp (Ambádi, Sherria), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder Net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | Acres. | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad. Rayatwári | 18,126 | 2,556 | 9,145 | 343 | 588 | ... | ... | ... | ... | 30,758 | 201 | 636 | ... | ... | 837 | 160,520 | 1,029 | 64 | ... | ... | ... | 161,613 | 249 | 721,369 | 17,154 | 704,215 |
| | Other Govt. | 11,219 | 844 | 2,568 | 101 | 37 | ... | ... | ... | ... | 14,769 | ... | 238 | ... | ... | 238 | 182,098 | 1,088 | 141 | ... | ... | ... | 183,327 | 12 | 596,528 | 2,221 | 594,307 |
| | Alienated | 1,429 | ... | 141 | ... | ... | ... | ... | ... | ... | 1,570 | ... | ... | ... | ... | ... | 21,072 | 7 | ... | ... | ... | ... | 21,079 | ... | 42,927 | 102 | 42,825 |
| | Total | 30,774 | 3,400 | 11,854 | 444 | 625 | ... | ... | ... | ... | 47,097 | 201 | 874 | ... | ... | 1,075 | 363,690 | 2,124 | 205 | ... | ... | ... | 366,019 | 261 | 1,360,824 | 19,477 | 1,341,347 |
| 2 | Kaira Rayatwári | 5,544 | 325 | 5,675 | 488 | 9 | ... | ... | ... | ... | 12,041 | 128 | 801 | ... | ... | 929 | 7,100 | 115 | 1,734 | ... | ... | ... | 8,949 | 13 | 564,603 | 15,077 | 549,526 |
| | Other Govt. | 1,830 | ... | 668 | 71 | ... | ... | ... | ... | ... | 2,569 | 138 | 61 | ... | ... | 199 | 4,173 | 1 | 617 | ... | ... | ... | 4,791 | 31 | 160,192 | 4,516 | 155,676 |
| | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Total | 7,374 | 325 | 6,343 | 559 | 9 | ... | ... | ... | ... | 14,610 | 266 | 862 | ... | ... | 1,128 | 11,273 | 116 | 2,351 | ... | ... | ... | 13,740 | 44 | 724,795 | 19,593 | 705,202 |
| 3 | Panch Maháls. Rayatwári | 18,828 | 97 | 1,546 | ... | 507 | 6,862 | ... | ... | ... | 27,840 | 13 | ... | ... | ... | 13 | 563 | 3,037 | 427 | ... | ... | ... | 4,027 | ... | 275,984 | 43,799 | 232,185 |
| | Other Govt. | 1,454 | ... | 368 | ... | 30 | 1,422 | ... | ... | ... | 3,274 | ... | ... | ... | ... | ... | 542 | 1,334 | 197 | ... | ... | ... | 2,072 | ... | 68,974 | 6,326 | 62,648 |
| | Alienated | 580 | 10 | 200 | ... | 30 | 642 | ... | ... | ... | 1,462 | ... | ... | ... | ... | ... | 88 | 114 | 43 | ... | ... | ... | 245 | ... | 23,595 | 1,883 | 21,712 |
| | Total | 20,862 | 107 | 2,114 | ... | 567 | 8,926 | ... | ... | ... | 32,576 | 13 | ... | ... | ... | 13 | 1,192 | 4,485 | 667 | ... | .. | ... | 6,344 | ... | 368,553 | 52,008 | 316,545 |
| 4 | Broach Rayatwári | 12,837 | ... | 1,293 | ... | ... | ... | ... | ... | ... | 14,130 | 790 | 29 | ... | ... | 819 | 309,537 | 30 | 2 | ... | ... | ... | 309,569 | 25 | 595,111 | 377 | 594,734 |
| | Other Govt. | 41 | ... | ... | ... | ... | ... | ... | ... | ... | 41 | ... | ... | ... | ... | ... | 559 | ... | ... | ... | ... | ... | 559 | ... | 900 | ... | 900 |
| | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Total | 12,878 | ... | 1,293 | ... | ... | ... | ... | .. | ... | 14,171 | 790 | 29 | ... | ... | 819 | 310,096 | 30 | 2 | ... | ... | ... | 310,128 | 25 | 596,011 | 377 | 595,634 |
| 5 | Surat Rayatwári | 2,787 | ... | 43,312 | ... | 17 | 222 | 163 | ... | ... | 46,451 | ... | 53 | ... | ... | 53 | 105,525 | 3,099 | 46 | ... | ... | ... | 108,670 | 104 | 537,562 | 58,684 | 478,878 |
| | Other Govt. | 8 | ... | 511 | ... | ... | 4 | 22 | ... | ... | 545 | ... | ... | ... | ... | ... | 1,309 | 10 | ... | ... | ... | ... | 1,319 | ... | 5,812 | 585 | 5,227 |
| | Alienated | 67 | ... | 62 | ... | ... | ... | 3 | ... | ... | 132 | ... | ... | ... | ... | ... | 531 | 4 | ... | ... | ... | ... | 535 | ... | 3,795 | 19 | 3,776 |
| | Total | 2,812 | ... | 43,885 | ... | 17 | 226 | 188 | ... | ... | 47,128 | ... | 53 | ... | ... | 53 | 107,365 | 3,113 | 46 | ... | ... | ... | 110,524 | 104 | 547,169 | 59,288 | 487,881 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. Rayatwári | 62,202 | 27,988 | 5,181 | 2,030 | ... | 7,059 | 3,344 | .. | ... | 107,804 | 776 | ... | 292 | ... | 1,068 | 1,116,222 | 1,241 | 5,012 | ... | ... | 1 | 1,122,476 | 44 | 2,888,982 | 10,930 | 2,878,052 |
| | Other Govt. | 3,680 | 1,208 | 643 | ... | ... | 1,588 | ... | ... | ... | 7,119 | ... | ... | ... | ... | ... | 3,730 | 399 | 191 | ... | ... | ... | 4,320 | ... | 51,392 | ... | 51,392 |
| | Alienated | 1,187 | 629 | 104 | ... | ... | 178 | 14 | ... | ... | 2,112 | ... | ... | ... | ... | ... | 27,786 | 76 | 114 | ... | ... | ... | 27,976 | ... | 72,033 | 179 | 71,854 |
| | Total | 67,069 | 29,825 | 5,928 | 2,030 | ... | 8,825 | 3,358 | ... | ... | 117,035 | 776 | ... | 292 | ... | 1,068 | 1,147,738 | 1,716 | 5,317 | ... | ... | 1 | 1,154,772 | 44 | 3,012,407 | 11,109 | 3,001,298 |
| 7 | Násik Rayatwári | 24,481 | 38,069 | 3,565 | 8,764 | ... | 107,393 | 9,642 | ... | ... | 191,914 | ... | ... | ... | ... | ... | 34,230 | 2,844 | 65 | ... | ... | ... | 37,139 | 1 | 1,915,444 | 24,719 | 1,890,725 |
| | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Alienated | 646 | 1,725 | 40 | 790 | ... | 4,373 | 811 | ... | ... | 8,385 | 7 | .. | ... | ... | 7 | 431 | 408 | ... | ... | ... | ... | 839 | ... | 111,211 | 1,687 | 109,524 |
| | Total | 25,127 | 39,794 | 3,605 | 9,554 | ... | 111,766 | 10,453 | ... | ... | 200,299 | 7 | ... | ... | ... | 7 | 34,661 | 3,252 | 65 | ... | ... | ... | 37,978 | 1 | 2,026,655 | 26,406 | 2,000,249 |
| 8 | Ahmadnagar. Rayatwári | 6,702 | 12,153 | 252 | 110,213 | ... | 29,364 | 3,314 | ... | 343 | 162,341 | 280 | ... | ... | ... | 280 | 52,132 | 192 | 3,385 | ... | ... | ... | 55,709 | 29 | 2,447,673 | 26,535 | 2,421,138 |
| | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Alienated | 638 | 1,570 | 10 | 14,416 | ... | 388 | 250 | ... | ... | 17,272 | 51 | ... | ... | ... | 51 | 12,332 | 6 | 489 | ... | ... | ... | 12,827 | 12 | 324,474 | 1,498 | 322,976 |
| | Total | 7,340 | 13,723 | 262 | 124,629 | ... | 29,752 | 3,564 | ... | 343 | 179,613 | 331 | ... | ... | ... | 331 | 64,464 | 198 | 3,874 | ... | ... | ... | 68,536 | 41 | 2,772,147 | 28,033 | 2,744,114 |
| 9 | Poona Rayatwári | 2,504 | 812 | 320 | 89,107 | ... | 36,960 | 9,350 | ... | 64 | 139,117 | ... | ... | ... | ... | ... | 163 | 332 | 2,619 | ... | ... | ... | 3,114 | 261 | 1,863,132 | 81,726 | 1,781,406 |
| | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | Alienated | 583 | 73 | 9 | 10,198 | ... | 4,992 | 2,135 | ... | ... | 17,990 | ... | ... | ... | ... | ... | 24 | 45 | 291 | ... | ... | ... | 360 | 821 | 322,369 | 12,603 | 309,766 |
| | Total | 3,087 | 885 | 329 | 99,305 | ... | 41,952 | 11,485 | ... | 64 | 157,107 | ... | ... | ... | ... | ... | 187 | 377 | 2,910 | ... | ... | ... | 3,474 | 1,082 | 2,185,501 | 94,329 | 2,091,172 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 3,516 | 33,507 | 9,453 | 152,826 | ... | 17,463 | 33,780 | ... | ... | 250,545 | 67 | ... | 239 | ... | 306 | 2,700 | 280 | 15,644 | ... | ... | 83 | 18,707 | 66 | 2,031,977 | 24,799 | 2,007,178 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 85 | 1,910 | 615 | 10,629 | ... | 1,374 | 2,513 | ... | ... | 17,126 | ... | ... | ... | ... | ... | 117 | 1 | 668 | ... | ... | ... | 786 | 1 | 152,350 | 1,847 | 150,503 |
| | | Total | 3,601 | 35,417 | 10,068 | 163,455 | ... | 18,837 | 36,293 | ... | ... | 267,671 | 67 | ... | 239 | ... | 306 | 2,817 | 281 | 16,312 | ... | ... | 83 | 19,493 | 67 | 2,184,327 | 26,646 | 2,157,681 |
| 11 | Sátára | Rayatwári | 128 | 1,826 | 533 | 23,021 | 9 | 16,083 | 45,520 | ... | 1 | 87,121 | ... | ... | ... | ... | ... | 7,295 | 3,776 | 5,096 | ... | ... | ... | 16,167 | 88 | 1,581,806 | 89,486 | 1,492,320 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 21 | 477 | 95 | 3,256 | ... | 4,028 | 14,332 | ... | ... | 22,209 | ... | ... | ... | ... | ... | 331 | 904 | 1,099 | ... | ... | 10 | 2,344 | 3 | 331,204 | 24,580 | 306,624 |
| | | Total | 149 | 2,303 | 628 | 26,277 | 9 | 20,111 | 59,852 | ... | 1 | 109,330 | ... | ... | ... | ... | ... | 7,626 | 4,680 | 6,195 | ... | ... | 10 | 18,511 | 91 | 1,913,010 | 114,066 | 1,798,944 |
| | *II V.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 2,251 | 1,526 | 8,300 | 26,929 | ... | 7,293 | 10,472 | ... | ... | 56,771 | ... | ... | ... | ... | ... | 121,488 | 1,768 | 2,513 | ... | ... | ... | 125,569 | 9 | 1,456,262 | 24,740 | 1,431,522 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 319 | 404 | 1,885 | 8,025 | ... | 580 | 2,406 | ... | ... | 13,619 | ... | ... | ... | ... | ... | 22,387 | 657 | 597 | ... | ... | ... | 23,641 | 5 | 317,822 | 2,321 | 315,001 |
| | | Total | 2,570 | 1,930 | 10,185 | 34,954 | ... | 7,873 | 12,878 | ... | ... | 70,390 | ... | ... | ... | ... | ... | 143,875 | 2,425 | 2,910 | ... | ... | ... | 149,210 | 14 | 1,774,084 | 27,561 | 1,746,523 |
| 13 | Bijápur | Rayatwári | 13,473 | 54,125 | 6,092 | 80,865 | ... | 29,936 | 26 | ... | ... | 184,517 | ... | ... | ... | ... | ... | 342,021 | 142 | 9,244 | ... | ... | ... | 351,407 | 19 | 2,485,554 | 4,566 | 2,480,988 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 1,172 | 5,588 | 846 | 8,104 | ... | 2,450 | 11 | ... | ... | 18,171 | ... | ... | ... | ... | ... | 43,798 | 2 | 822 | ... | ... | ... | 44,622 | 1 | 284,607 | 392 | 284,215 |
| | | Total | 14,645 | 59,713 | 6,938 | 88,969 | ... | 32,386 | 37 | ... | ... | 202,688 | ... | ... | ... | ... | ... | 385,819 | 144 | 10,066 | ... | ... | ... | 396,029 | 20 | 2,770,161 | 4,958 | 2,765,203 |
| 14 | Dhárwár | Rayatwári | 8,010 | 20,342 | 16,560 | 40,847 | ... | 4,252 | ... | ... | ... | 90,011 | ... | ... | ... | ... | ... | 457,111 | 315 | 5,038 | ... | ... | ... | 462,464 | 23 | 1,977,602 | 25,656 | 1,951,946 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 307 | 942 | 889 | 1,526 | ... | 428 | ... | ... | ... | 4,092 | ... | ... | ... | ... | ... | 14,293 | 33 | 329 | ... | ... | ... | 14,655 | 1 | 111,104 | 2,060 | 109,044 |
| | | Total | 8,317 | 21,284 | 17,449 | 42,373 | ... | 4,680 | ... | ... | ... | 94,103 | ... | ... | ... | ... | ... | 471,404 | 348 | 5,367 | ... | ... | ... | 477,119 | 24 | 2,088,706 | 27,716 | 2,060,990 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 4,447 | ... | 2,854 | 2 | 32 | 13,163 | ... | ... | 43 | 20,541 | ... | ... | ... | ... | ... | ..... | 3,403 | 2,476 | ... | ... | ... | 5,879 | 15 | 518,160 | 6,115 | 512,045 |
| | | Other Govt. | 79 | ... | ... | ... | ... | 55 | ... | ... | ... | 134 | ... | ... | ... | ... | ... | ..... | 30 | 41 | ... | ... | ... | 71 | ... | 6,946 | 21 | 6,925 |
| | | Alienated | 6 | ... | ... | ... | ... | 86 | ... | ... | ... | 92 | ... | ... | ... | ... | ... | ..... | 1 | ... | ... | ... | ... | 1 | ... | 8,495 | 72 | 8,423 |
| | | Total | 4,532 | ... | 2,854 | 2 | 32 | 13,304 | ... | ... | 43 | 20,767 | ... | ... | ... | ... | ... | ... | 3,434 | 2,517 | ... | ... | ... | 5,951 | 15 | 533,601 | 6,208 | 527,393 |
| 16 | Kolába | Rayatwári | 1,318 | ... | 7 | ... | ... | 32 | ... | ... | 124 | 1,481 | ... | ... | ... | ... | ... | ..... | 200 | 1 | .. | ... | ... | 201 | 2 | 182,650 | 5,808 | 176,842 |
| | | Other Govt. | 4,280 | ... | 18 | ... | ... | 45 | ... | ... | ... | 4,343 | ... | ... | ... | ... | ... | ..... | 452 | ... | ... | ... | ... | 452 | ... | 164,772 | 5,047 | 159,725 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | 977 | 25 | 952 |
| | | Total | 5,598 | ... | 25 | ... | ... | 77 | ... | ... | 124 | 5,824 | ... | ... | ... | ... | ... | ... | 652 | 1 | ... | ... | ... | 653 | 2 | 348,399 | 10,880 | 337,519 |
| 17 | Rátnágiri | Rayatwári | 1,784 | ... | ... | ... | ... | ... | ... | ... | ... | 1,784 | ... | ... | ... | ... | ... | ..... | 70 | .. | ... | ... | 2 | 72 | 131 | 38,819 | 1,626 | 37,193 |
| | | Other Govt. | 2,948 | ... | ... | ... | ... | ... | ... | ... | 1 | 2,949 | ... | ... | ... | ... | ... | ..... | 231 | ... | ... | ... | ... | 231 | ... | 81,187 | 3,711 | 77,476 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total | 4,732 | ... | ... | ... | ... | ... | ... | ... | 1 | 4,733 | ... | ... | ... | ... | ... | ... | 301 | ... | ... | ... | 2 | 303 | 131 | 120,006 | 5,337 | 114,669 |
| 18 | Kánara | Rayatwári | 62 | 1 | 226 | ... | ... | 168 | ... | ... | 319 | 776 | ... | ... | ... | ... | ... | ..... | 60 | 88 | ... | ... | ... | 148 | 65 | 251,981 | 11,582 | 240,399 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total | 62 | 1 | 226 | ... | ... | 168 | ... | ... | 319 | 776 | ... | ... | ... | ... | ... | ... | 60 | 88 | ... | ... | ... | 148 | 65 | 251,981 | 11,582 | 240,399 |
| | Total A. | Rayatwári | 188,950 | 193,327 | 114,314 | 535,435 | 1,162 | 276,250 | 115,611 | ... | 894 | 1,425,943 | 2,255 | 1,519 | 531 | ... | 4,305 | 2,716,607 | 21,933 | 53,254 | ... | ... | 86 | 2,791,880 | 1,144 | 22,334,671 | 473,379 | 21,861,292 |
| | | Other Govt. | 25,539 | 2,052 | 4,776 | 172 | 67 | 3,114 | 22 | ... | 1 | 35,743 | 138 | 299 | ... | ... | 437 | 192,410 | 3,545 | 1,187 | ... | ... | ... | 197,142 | 43 | 1,136,703 | 22,427 | 1,114,276 |
| | | Alienated | 7,040 | 13,328 | 4,896 | 56,944 | 30 | 19,519 | 22,475 | ... | ... | 124,232 | 58 | ... | ... | ... | 58 | 143,190 | 2,258 | 4,452 | ... | ... | 10 | 149,910 | 844 | 2,106,963 | 49,768 | 2,057,195 |
| | | Total | 221,529 | 208,707 | 123,986 | 592,551 | 1,259 | 298,883 | 138,108 | ... | 895 | 1,585,918 | 2,451 | 1,818 | 531 | ... | 4,800 | 3,052,207 | 27,736 | 58,893 | ... | ... | 96 | 3,138,932 | 2,031 | 25,578,337 | 545,574 | 25,032,763 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 4,679 | ... | 105 | ... | 16,004 | ... | ... | ... | 32,959 | 53,747 | 24 | ... | ... | ... | 24 | 783 | 115 | ... | ... | ... | ... | 898 | 2 | 495,761 | 46,553 | 449,208 |
| 20 | Hyderabad | | 42,119 | ... | ... | ... | 10,376 | ... | ... | ... | 40,447 | 92,942 | 6,834 | 1 | ... | 8 | 6,843 | 72,857 | 423 | 2 | ... | .. | ... | 73,282 | 42 | 849,175 | 13,836 | 835,339 |
| 21 | Shikárpur | | 10,072 | ... | ... | ... | *68,145 | ... | ... | ... | 66,433 | 144,650 | 1,492 | ... | ... | 452 | 1,944 | 6,545 | 50 | 1 | ... | ... | ... | 6,596 | 316 | 1,024,697 | 167,357 | 857,340 |
| 22 | Upper Sind Frontier | | 21,560 | ... | ... | ... | 10,125 | ... | ... | ... | 8,343 | 40,028 | 6 | ... | ... | ... | 6 | 749 | 22 | ... | ... | ... | ... | 771 | 112 | 168,669 | 7,509 | 161,160 |
| 23 | Thar and Párkar | | 8,149 | ... | ... | ... | 2,477 | ... | ... | ... | 20,441 | 31,067 | 425 | ... | ... | ... | 425 | 24,553 | 16 | ... | ... | ... | ... | 24,569 | ... | 584,300 | 2,537 | 581,763 |
| | | Total | 86,579 | ... | 105 | ... | 107,127 | ... | ... | ... | 168,623 | 362,434 | 8,781 | 1 | ... | 460 | 9,242 | 105,487 | 626 | 3 | ... | ... | ... | 106,116 | 472 | 3,122,602 | 237,792 | 2,884,810 |
| | Grand Total | | 308,108 | 208,707 | 124,091 | 592,551 | 108,386 | 298,883 | 138,108 | ... | 169,518 | 1,948,352 | 11,232 | 1,819 | 531 | 460 | 14,042 | 3,157,694 | 28,362 | 58,896 | ... | ... | 96 | 3,245,048 | 2,503 | 28,700,939 | 783,366 | 27,917,573 |

* In last report area (65,930 Acres) under "Rape" in Shikárpur was inadvertently entered under "Castor oil seed."

# IV.—Irrigation, 1890-91.

| No. | District. | | Net Area cropped. | Area irrigated from Canals. | Area irrigated from other sources. | Total Area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct Area cropped with irrigation more than once. | Balance net irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | A—Bombay Presidency Proper. | | Acres. | | | Acres. | | | | | | | | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 704,215 | 3,784 | 43,972 | 47,756 | 11,988 | 24,371 | 12,126 | 1,040 | 3,451 | 2,965 | 16 | 55,957 | 8,201 | 47,756 |
| | | Other Government ... ... | 594,307 | 165 | 19,747 | 19,912 | 12,339 | 2,298 | 1,999 | 751 | 724 | 125 | 1,679 | 19,915 | 3 | 19,912 |
| | | Alienated ... ... ... | 42,825 | ..... | 3,205 | 3,205 | 2,442 | 376 | 261 | 1 | 113 | 27 | ..... | 3,220 | 15 | 3,205 |
| | | Total ... | 1,341,347 | 3,949 | 66,924 | 70,873 | 26,769 | 27,045 | 14,386 | 1,792 | 4,288 | 3,117 | 1,695 | 79,092 | 8,219 | 70,873 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 549,526 | 4,850 | 22,742 | 27,592 | 3,854 | 7,749 | 6,241 | 233 | 1,958 | 7,318 | 2,083 | 29,436 | 1,844 | 27,592 |
| | | Other Government ... ... | 155,676 | ..... | 14,697 | 14,697 | 465 | 385 | 1,330 | 215 | 1,175 | 10,759 | 872 | 15,201 | 504 | 14,697 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 705,202 | 4,850 | 37,439 | 42,289 | 4,319 | 8,134 | 7,571 | 448 | 3,133 | 18,077 | 2,955 | 44,637 | 2,348 | 42,289 |
| 3 | Panch Maháls. | Rayatwári ... ... ... | 232,185 | ..... | 1,198 | 1,198 | 452 | ..... | 40 | 190 | 273 | 247 | ..... | 1,202 | 4 | 1,198 |
| | | Other Government ... ... | 62,648 | ..... | 492 | 492 | 172 | ..... | ..... | 25 | 290 | 5 | ..... | 492 | ..... | 492 |
| | | Alienated ... ... ... | 21,712 | ..... | 15 | 15 | ..... | ..... | ..... | 10 | 5 | ..... | ..... | 15 | ..... | 15 |
| | | Total ... | 316,545 | ... | 1,705 | 1,705 | 624 | ... | 40 | 225 | 568 | 252 | ... | 1,709 | 4 | 1,705 |
| 4 | Broach ... | Rayatwári ... ... ... | 594,734 | ..... | 763 | 763 | 1 | ..... | 17 | 51 | 492 | 209 | ..... | 770 | 7 | 763 |
| | | Other Government ... ... | 900 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 595,634 | ... | 763 | 763 | 1 | ... | 17 | 51 | 492 | 209 | ... | 770 | 7 | 763 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 478,878 | ..... | 10,609 | 10,609 | 14 | 3,406 | 56 | 4,978 | 1,234 | 1,076 | ..... | 10,764 | 155 | 10,609 |
| | | Other Government ... ... | 5,227 | ..... | 95 | 95 | ..... | ..... | ..... | 62 | 6 | 27 | ..... | 95 | ..... | 95 |
| | | Alienated ... ... ... | 3,776 | ..... | 7 | 7 | ..... | ..... | ..... | 7 | ..... | ..... | ..... | 7 | ..... | 7 |
| | | Total ... | 487,881 | ... | 10,711 | 10,711 | 14 | 3,406 | 56 | 5,047 | 1,240 | 1,103 | ... | 10,866 | 155 | 10,711 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh .. | Rayatwári ... ... ... | 2,878,052 | 10,752 | 21,424 | 32,176 | 10,666 | 1,817 | 3,124 | 1,403 | 7,475 | 9,151 | 261 | 33,897 | 1,721 | 32,176 |
| | | Other Government ... ... | 51,392 | 41 | 2 | 43 | 15 | ..... | 20 | 6 | 2 | ..... | ..... | 43 | ..... | 43 |
| | | Alienated ... ... ... | 71,854 | 247 | 1,043 | 1,290 | 204 | 8 | 37 | 130 | 859 | 59 | ..... | 1,297 | 7 | 1,290 |
| | | Total ... | 3,001,298 | 11,040 | 22,469 | 33,509 | 10,885 | 1,825 | 3,181 | 1,539 | 8,336 | 9,210 | 261 | 35,237 | 1,728 | 33,509 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 1,890,725 | 24,734 | 35,519 | 60,253 | 21,203 | 4,253 | 14,815 | 5,492 | 10,787 | 11,283 | 1,249 | 69,082 | 8,829 | 60,253 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 109,524 | 1,795 | 2,803 | 4,598 | 1,059 | 238 | 572 | 569 | 1,145 | 984 | 132 | 4,699 | 101 | 4,598 |
| | | Total ... | 2,000,249 | 26,529 | 38,322 | 64,851 | 22,262 | 4,491 | 15,387 | 6,061 | 11,932 | 12,267 | 1,381 | 73,781 | 8,930 | 64,851 |
| 9 | Ahmadnagar. | Rayatwári ... ... ... | 2,421,138 | 4,979 | 69,695 | 74,674 | 26,437 | 692 | 30,263 | 2,262 | 13,302 | 9,633 | 1,665 | 84,254 | 9,580 | 74,674 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 322,976 | 113 | 8,716 | 8,829 | 3,951 | 209 | 3,121 | 183 | 1,618 | 482 | 58 | 9,622 | 793 | 8,829 |
| | | Total ... | 2,744,114 | 5,092 | 78,411 | 83,503 | 30,388 | 901 | 33,384 | 2,445 | 14,920 | 10,115 | 1,723 | 93,876 | 10,373 | 83,503 |
| 8 | Poona... ... | Rayatwári ... ... ... | 1,781,406 | 26,769 | 68,376 | 95,145 | 21,645 | 1,177 | 43,376 | 5,984 | 35,049 | 6,230 | 2,698 | 116,159 | 21,014 | 95,145 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated .. ... ... | 309,766 | 2,642 | 9,430 | 12,072 | 3,214 | 91 | 5,420 | 934 | 3,772 | 394 | 437 | 14,262 | 2,190 | 12,072 |
| | | Total ... | 2,091,172 | 29,411 | 77,806 | 107,217 | 24,859 | 1,268 | 48,796 | 6,918 | 38,821 | 6,624 | 3,135 | 130,421 | 23,204 | 107,217 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 2,007,178 | 8,864 | 66,075 | 74,939 | 27,690 | 2,785 | 40,429 | 2,970 | 5,451 | 17,778 | 369 | 94,472 | 22,533 | 74,939 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 150,503 | 290 | 4,412 | 4,702 | 2,209 | 155 | 2,680 | 181 | 328 | 848 | 84 | 6,485 | 1,783 | 4,702 |
| | | Total | 2,157,681 | 9,154 | 70,487 | 79,641 | 29,899 | 2,940 | 43,109 | 3,151 | 5,779 | 18,626 | 453 | 103,957 | 24,316 | 79,641 |
| 11 | Sátára | Rayatwári | 1,492,320 | 6,584 | 76,729 | 83,313 | 17,478 | 4,145 | 23,528 | 10,363 | 12,854 | 29,123 | 789 | 98,280 | 14,967 | 83,313 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 306,624 | 903 | 29,533 | 21,436 | 4,366 | 1,696 | 3,796 | 2,903 | 3,959 | 7,052 | 164 | 23,936 | 2,500 | 21,436 |
| | | Total | 1,798,944 | 7,487 | 97,262 | 104,749 | 21,844 | 5,841 | 27,324 | 13,266 | 16,813 | 36,175 | 953 | 122,216 | 17,467 | 104,749 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 1,431,522 | 1,880 | 32,212 | 34,092 | 2,027 | 8,146 | 5,632 | 8,061 | 9,610 | 2,521 | 74 | 36,071 | 1,979 | 34,092 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 315,001 | 1,458 | 8,591 | 10,049 | 1,099 | 230 | 1,990 | 2,826 | 2,940 | 1,560 | 57 | 10,702 | 653 | 10,049 |
| | | Total | 1,746,523 | 3,338 | 40,803 | 44,141 | 3,126 | 8,376 | 7,622 | 10,887 | 12,550 | 4,081 | 131 | 46,773 | 2,632 | 44,141 |
| 13 | Bijápur | Rayatwári | 2,480,988 | 506 | 7,961 | 8,467 | 1,548 | 1,202 | 1,040 | 968 | 3,057 | 1,693 | 170 | 9,678 | 1,211 | 8,467 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 284,215 | ..... | 1,218 | 1,218 | 198 | 127 | 149 | 115 | 451 | 224 | 23 | 1,287 | 69 | 1,218 |
| | | Total | 2,765,203 | 506 | 9,179 | 9,685 | 1,746 | 1,329 | 1,189 | 1,083 | 3,508 | 1,917 | 193 | 10,965 | 1,280 | 9,685 |
| 14 | Dhárwár | Rayatwári | 1,951,946 | 8,682 | 73,818 | 82,500 | 28 | 73,223 | 510 | 3,550 | 3,710 | 2,343 | 2 | 83,366 | 866 | 82,500 |
| | | Other Government | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 109,044 | 781 | 8,854 | 9,635 | ... | 8,822 | ..... | 386 | 323 | 109 | ..... | 9,640 | 5 | 9,635 |
| | | Total | 2,060,990 | 9,463 | 82,672 | 92,135 | 28 | 82,045 | 510 | 3,936 | 4,033 | 2,452 | 2 | 93,006 | 871 | 92,135 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 512,045 | ..... | 5,078 | 5,078 | ..... | ..... | ..... | 1,327 | 3,625 | 131 | 30 | 5,113 | 35 | 5,078 |
| | | Other Government | 6,925 | ..... | 10 | 10 | ..... | ..... | ..... | ... | 10 | ..... | ..... | 10 | ..... | 10 |
| | | Alienated | 8,423 | ..... | 50 | 50 | ..... | ..... | ..... | ... | 50 | ..... | ..... | 50 | ..... | 50 |
| | | Total | 527,393 | ... | 5,138 | 5,138 | ... | ... | ... | 1,327 | 3,685 | 131 | 30 | 5,173 | 35 | 5,138 |
| 16 | Kolába | Rayatwári | 176,842 | ..... | 2,460 | 2,460 | ..... | ..... | ..... | 41 | 1,836 | 585 | ..... | 2,462 | 2 | 2,460 |
| | | Other Government | 159,725 | ..... | 20 | 20 | ..... | ..... | ..... | 2 | 14 | 4 | ..... | 20 | ..... | 20 |
| | | Alienated | 952 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 337,519 | ... | 2,480 | 2,480 | ... | ... | ... | 43 | 1,850 | 589 | ... | 2,482 | 2 | 2,480 |
| 17 | Ratnágiri | Rayatwári | 37,193 | 32 | 955 | 987 | ..... | 874 | 37 | ..... | 81 | ..... | ..... | 992 | 5 | 987 |
| | | Other Government | 77,476 | 31 | 1,303 | 1,334 | ..... | 676 | 102 | ..... | 559 | ..... | ..... | 1,337 | 3 | 1,334 |
| | | Alienated | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 114,669 | 63 | 2,258 | 2,321 | ... | 1,550 | 139 | ... | 640 | ... | ... | 2,329 | 8 | 2,321 |
| 18 | Kánara | Rayatwári | 240,399 | ..... | 26,312 | 26,312 | ..... | 13,954 | 662 | 2,867 | 6,511 | 2,485 | ..... | 26,479 | 167 | 26,312 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | ..... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 240,399 | ... | 26,312 | 26,312 | ... | 13,954 | 662 | 2,867 | 6,511 | 2,485 | ... | 26,479 | 167 | 26,312 |
| | Total A. | Rayatwari | 21,861,299 | 102,416 | 565,898 | 668,314 | 145,031 | 147,794 | 181,896 | 51,780 | 129,756 | 104,771 | 9,406 | 761,434 | 93,120 | 668,314 |
| | | Other Government | 1,114,276 | 237 | 36,366 | 36,603 | 12,991 | 3,359 | 3,451 | 1,061 | 2,780 | 10,920 | 2,551 | 37,113 | 510 | 36,603 |
| | | Alienated | 2,057,195 | 8,229 | 68,877 | 77,106 | 18,742 | 11,952 | 18,026 | 8,245 | 15,563 | 11,739 | 955 | 85,222 | 8,116 | 77,106 |
| | | Total | 25,032,763 | 110,882 | 671,141 | 782,023 | 176,764 | 163,105 | 203,373 | 61,086 | 139,099 | 127,430 | 12,912 | 883,769 | 101,746 | 782,023 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 449,208 | 294,952 | 154,256 | 449,208 | 45,008 | 184,178 | 159,071 | 1,068 | 6,615 | 95,779 | 4,043 | 495,762 | 46,554 | 449,208 |
| 20 | Hyderabad | | 835,339 | 772,509 | 53,920 | 826,429 | 45,419 | 176,324 | 417,733 | 926 | 13,321 | 171,673 | 14,326 | 839,722 | 13,293 | 826,429 |
| 21 | Shikárpur | | 857,340 | 585,534 | 271,806 | 857,340 | 270,898 | 257,367 | 323,691 | 520 | 14,682 | 155,691 | 1,848 | 1,024,697 | 167,357 | 857,340 |
| 22 | Upper Sind Frontier | | 161,160 | 151,597 | 9,563 | 161,160 | 16,923 | 7,342 | 102,131 | 4 | 1,106 | 41,156 | 7 | 168,669 | 7,509 | 161,160 |
| 23 | Thar and Párkar | | 581,763 | 210,319 | 27 | 210,346 | 26,392 | 80,946 | 50,724 | 15 | 558 | 54,232 | ... | 212,867 | 2,521 | 210,346 |
| | | Total B. | 2,884,810 | 2,014,911 | 489,572 | 2,504,483 | 404,640 | 706,157 | 1,053,350 | 2,533 | 36,282 | 518,531 | 20,224 | 2,741,717 | 237,234 | 2,504,483 |
| | | Grand Total | 27,917,573 | 2,125,793 | 1,160,713 | 3,286,506 | 581,404 | 869,262 | 1,256,723 | 63,619 | 175,381 | 645,961 | 33,136 | 3,625,486 | 338,980 | 3,286,506 |

# V.—Agricultural Stock, 1890-91.

| No. | District. | | Cattle and other Quadrupeds. Plough Cattle. Oxen. | Plough Cattle. He-Buffaloes. | Bulls for breeding purposes. Bulls. | Bulls for breeding purposes. Bull Buffaloes. | Oxen and He-Buffaloes, for other purposes. Oxen. | Oxen and He-Buffaloes, for other purposes. He-Buffaloes. | Milch Cattle. Cows. | Milch Cattle. She-Buffaloes. | Young Stock. Calves. | Young Stock. Buffalo Calves. | Total Cattle. | Horses and Ponies. | Sheep. | Goats. | Ploughs. Small. | Ploughs. Large, *i.e.* over two Bullocks. | Carts. For riding. | Carts. For carrying loads. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwari ... | 83,254 | 37 | 763 | 293 | 4,231 | 628 | 52,127 | 62,729 | 31,013 | 28,930 | 264,005 | 3,837 | 26,275 | 13,691 | 39,277 | 34 | 1,649 | 12,627 |
| | | Other Government... | 55,731 | 13 | 197 | 124 | 666 | 185 | 39,201 | 26,655 | 17,156 | 11,535 | 151,463 | 2,753 | 21,973 | 19,916 | 25,394 | ..... | 177 | 8,045 |
| | | Alienated ... | 6,238 | 1 | 23 | 10 | 5 | 6 | 3,753 | 3,018 | 1,860 | 1,364 | 16,278 | 407 | 3,651 | 3,224 | 2,656 | ..... | 51 | 1,073 |
| | | Total ... | 145,223 | 51 | 983 | 427 | 4,902 | 819 | 95,081 | 92,402 | 50,029 | 41,829 | 431,746 | 6,997 | 51,899 | 36,831 | 67,327 | 34 | 1,877 | 21,745 |
| 2 | Kaira ... | Rayatwari ... | 90,705 | 17 | 180 | 291 | 693 | 73 | 41,144 | 74,539 | 34,371 | 53,219 | 295,232 | 1,774 | 5,240 | 26,841 | 49,408 | 3 | 748 | 19,163 |
| | | Other Government... | 22,141 | 8 | 23 | 130 | 192 | 80 | 3,337 | 36,238 | 4,522 | 22,637 | 89,308 | 326 | 1,162 | 7,499 | 13,711 | ..... | 528 | 7,940 |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Total ... | 112,846 | 25 | 203 | 421 | 885 | 153 | 44,481 | 110,777 | 38,893 | 75,856 | 384,540 | 2,100 | 6,402 | 34,340 | 63,119 | 3 | 1,276 | 27,103 |
| 3 | Panch Mahál ... | Rayatwari ... | 58,146 | 14 | 545 | 190 | 1,148 | 28 | 47,797 | 14,680 | 43,942 | 9,654 | 176,144 | 1,998 | 3,128 | 17,988 | 29,188 | ..... | 178 | 5,692 |
| | | Other Government... | 16,270 | 1 | 65 | 33 | 486 | 33 | 14,359 | 4,076 | 12,936 | 2,779 | 51,038 | 583 | 2,939 | 4,940 | 8,188 | ..... | 56 | 1,923 |
| | | Alienated ... | 4,554 | 10 | 37 | 17 | 3 | 3 | 3,869 | 1,102 | 3,365 | 667 | 13,627 | 93 | 2 | 1,140 | 2,202 | ..... | 3 | 539 |
| | | Total ... | 78,970 | 25 | 647 | 240 | 1,637 | 64 | 66,025 | 19,858 | 60,243 | 13,100 | 240,809 | 2,674 | 6,069 | 24,068 | 39,578 | ..... | 237 | 8,154 |
| 4 | Broach ... | Rayatwari ... | 55,579 | 3 | 57 | 95 | 690 | 49 | 11,282 | 29,420 | 15,527 | 19,175 | 131,877 | 2,470 | 15,778 | 25,848 | 26,972 | ..... | 3,147 | 16,008 |
| | | Other Government... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Total ... | 55,579 | 3 | 57 | 95 | 690 | 49 | 11,282 | 29,420 | 15,527 | 19,175 | 131,877 | 2,470 | 15,778 | 25,848 | 26,972 | ..... | 3,147 | 16,008 |
| 5 | Surat ... | Rayatwari ... | 98,499 | 3,943 | 284 | 199 | 8,888 | 324 | 64,601 | 43,254 | 76,617 | 33,292 | 329,901 | 1,483 | 66,913 | 28,343 | 46,847 | 910 | 9,202 | 27,955 |
| | | Other Government... | 719 | 60 | 1 | 2 | 46 | ... | 705 | 303 | 834 | 248 | 2,918 | 4 | 314 | 113 | 384 | 7 | 50 | 216 |
| | | Alienated ... | 689 | 8 | 5 | 1 | 11 | ... | 377 | 281 | 419 | 137 | 1,928 | 5 | 121 | 77 | 316 | 2 | 64 | 193 |
| | | Total ... | 99,907 | 4,011 | 290 | 202 | 8,945 | 324 | 65,683 | 43,838 | 77,870 | 33,677 | 334,747 | 1,492 | 67,348 | 28,533 | 47,547 | 919 | 9,316 | 28,364 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwari ... | 327,340 | 1,840 | 4,332 | 809 | 19,941 | 2,852 | 173,560 | 100,342 | 127,728 | 61,727 | 820,471 | 20,844 | 33,956 | 138,188 | 90,338 | 19,460 | 35,479 | 64,074 |
| | | Other Government... | 19,432 | 83 | 276 | 37 | 548 | 4 | 16,648 | 2,649 | 12,285 | 1,473 | 53,435 | 404 | 97 | 3,185 | 9,593 | 4 | 275 | 2,705 |
| | | Alienated ... | 9,961 | 36 | 40 | 9 | 595 | 71 | 5,071 | 2,691 | 3,528 | 1,560 | 23,562 | 458 | 939 | 4,311 | 2,171 | 1,020 | 815 | 1,370 |
| | | Total ... | 356,733 | 1,959 | 4,648 | 855 | 21,084 | 2,927 | 195,279 | 105,682 | 143,541 | 64,760 | 897,468 | 21,706 | 34,992 | 145,684 | 102,102 | 20,484 | 36,569 | 68,149 |
| 7 | Násik ... | Rayatwari ... | 200,094 | 22,226 | 3,225 | 229 | 10,572 | 552 | 151,055 | 26,266 | 82,760 | 12,375 | 509,354 | 12,459 | 92,167 | 118,504 | 49,622 | 23,794 | 12,363 | 20,158 |
| | | Other Government... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | 13,039 | 1,434 | 242 | 13 | 658 | 28 | 7,539 | 1,521 | 4,023 | 610 | 29,107 | 763 | 6,195 | 7,213 | 2,601 | 1,833 | 533 | 1,582 |
| | | Total ... | 213,133 | 23,660 | 3,467 | 242 | 11,230 | 580 | 158,594 | 27,787 | 86,783 | 12,985 | 538,461 | 13,222 | 98,362 | 125,717 | 52,223 | 25,627 | 12,896 | 21,740 |
| 8 | Ahmadnagar ... | Rayatwari ... | 254,245 | 5,713 | 607 | 168 | 8,754 | 1,139 | 178,187 | 30,353 | 111,373 | 15,564 | 606,103 | 20,572 | 257,584 | 172,496 | 25,192 | 39,464 | 11,093 | 15,913 |
| | | Other Government... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | 30,047 | 118 | 68 | 23 | 1,359 | 174 | 19,590 | 2,613 | 12,315 | 1,483 | 67,790 | 2,434 | 33,054 | 21,363 | 4,308 | 4,433 | 1,132 | 1,704 |
| | | Total ... | 284,292 | 5,831 | 675 | 191 | 10,113 | 1,313 | 197,777 | 32,966 | 123,688 | 17,047 | 673,893 | 23,006 | 290,638 | 193,859 | 29,500 | 43,897 | 12,225 | 17,617 |
| 9 | Poona ... | Rayatwari ... | 207,798 | 7,739 | 834 | 188 | 7,724 | 743 | 129,966 | 38,926 | 66,133 | 17,179 | 477,230 | 11,280 | 205,481 | 90,926 | 27,061 | 21,879 | 2,743 | 17,930 |
| | | Other Government... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | 40,428 | 395 | 70 | 23 | 813 | 162 | 22,894 | 6,403 | 11,442 | 2,817 | 85,447 | 1,899 | 22,171 | 14,312 | 2,843 | 5,158 | 332 | 4,131 |
| | | Total ... | 248,226 | 8,134 | 904 | 211 | 8,537 | 905 | 152,860 | 45,329 | 77,575 | 19,996 | 562,677 | 13,179 | 227,652 | 105,238 | 29,904 | 27,037 | 3,075 | 22,061 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... | 184,006 | 9,839 | 835 | 289 | 10,060 | 2,874 | 126,142 | 35,875 | 95,029 | 23,467 | 488,416 | 11,227 | 242,555 | 81,304 | 3,789 | 15,510 | 633 | 12,304 |
| | | Other Government... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... ... | 13,021 | 763 | 79 | 15 | 235 | 136 | 8,975 | 2,222 | 6,911 | 1,650 | 34,007 | 668 | 26,707 | 7,339 | 307 | 1,138 | 31 | 576 |
| | | Total ... | 197,027 | 10,602 | 914 | 304 | 10,295 | 3,010 | 135,117 | 38,097 | 101,940 | 25,117 | 522,423 | 11,895 | 269,262 | 88,643 | 4,096 | 16,648 | 664 | 12,880 |
| 11 | Sátára ... | Rayatwári ... ... | 190,150 | 15,271 | 381 | 145 | 5,077 | 856 | 114,365 | 60,981 | 75,897 | 38,852 | 501,975 | 12,185 | 323,810 | 69,200 | 20,259 | 19,198 | 679 | 18,158 |
| | | Other Government . | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... ... | 41,918 | 4,219 | 148 | 44 | 1,122 | 210 | 25,135 | 15,074 | 16,901 | 8,979 | 113,750 | 1,856 | 53,229 | 14,710 | 5,636 | 4,347 | 194 | 3,893 |
| | | Total ... | 232,068 | 19,490 | 529 | 189 | 6,199 | 1,066 | 139,500 | 76,055 | 92,798 | 47,831 | 615,725 | 14,041 | 377,039 | 83,910 | 25,895 | 23,545 | 873 | 22,051 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... | 138,493 | 34,157 | 1,605 | 326 | 7,789 | 1,533 | 90,989 | 64,577 | 81,280 | 42,943 | 463,692 | 5,435 | 170,054 | 68,416 | 49,955 | 8,990 | 454 | 24,224 |
| | | Other Government . | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... ... | 30,215 | 4,979 | 297 | 74 | 1,053 | 209 | 17,173 | 13,386 | 15,451 | 9,155 | 91,992 | 1,917 | 47,439 | 14,712 | 6,874 | 2,509 | 75 | 4,050 |
| | | Total ... | 168,708 | 39,136 | 1,902 | 400 | 8,842 | 1,742 | 108,162 | 77,963 | 96,731 | 52,098 | 555,684 | 7,352 | 217,493 | 83,128 | 56,829 | 11,499 | 529 | 28,274 |
| 13 | Bijápur ... | Rayatwári ... ... | 177,137 | 8,171 | 154 | 180 | 6,803 | 3,358 | 118,507 | 54,782 | 146,895 | 52,270 | 568,257 | 11,089 | 176,850 | 116,146 | 46,011 | 9,943 | 138 | 13,119 |
| | | Other Government . | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... ... | 23,951 | 1,206 | 14 | 21 | 559 | 466 | 16,333 | 7,527 | 19,329 | 7,240 | 76,646 | 1,104 | 26,029 | 18,355 | 6,893 | 1,135 | 15 | 1,409 |
| | | Total ... | 201,088 | 9,377 | 168 | 201 | 7,362 | 3,824 | 134,840 | 62,309 | 166,224 | 59,510 | 644,903 | 12,193 | 202,879 | 134,501 | 52,904 | 11,078 | 153 | 14,528 |
| 14 | Dhárwár ... | Rayatwári ... ... | 192,897 | 22,797 | 488 | 288 | 12,277 | 1,683 | 106,028 | 73,173 | 140,057 | 61,834 | 611,522 | 5,031 | 119,401 | 83,255 | 86,146 | 5,433 | 656 | 44,474 |
| | | Other Government . | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... ... | 14,475 | 2,980 | 15 | 12 | 755 | 41 | 9,280 | 4,944 | 11,548 | 4,345 | 48,395 | 392 | 4,554 | 5,394 | 7,127 | 285 | 39 | 3,129 |
| | | Total ... | 207,372 | 25,777 | 503 | 300 | 13,032 | 1,724 | 115,308 | 78,117 | 151,605 | 66,179 | 659,917 | 5,423 | 123,955 | 88,649 | 93,273 | 5,718 | 695 | 47,603 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... ... | 131,156 | 46,035 | 481 | 75 | 3,813 | 352 | 110,524 | 21,846 | 105,989 | 17,611 | 437,882 | 1,171 | 2,559 | 45,242 | 81,626 | ..... | 4,089 | 24,658 |
| | | Other Government . | 1,826 | 841 | 316 | 13 | 44 | ... | 2,021 | 324 | 1,416 | 256 | 7,087 | 132 | 80 | 452 | 1,216 | ..... | 49 | 332 |
| | | Alienated ... ... | 2,695 | 488 | ... | ... | 108 | 5 | 1,187 | 287 | 1,046 | 214 | 6,030 | 14 | 11 | 332 | 1,328 | ..... | 89 | 790 |
| | | Total ... | 135,677 | 47,364 | 827 | 88 | 3,965 | 357 | 113,732 | 22,457 | 108,451 | 18,081 | 450,999 | 1,317 | 2,650 | 46,026 | 84,170 | ... | 4,227 | 25,780 |
| 16 | Kolába ... | Rayatwári ... ... | 37,485 | 18,253 | 209 | 72 | 3,337 | 722 | 34,433 | 11,547 | 30,383 | 8,737 | 145,178 | 572 | 876 | 16,038 | 25,355 | ..... | 1,148 | 4,155 |
| | | Other Government . | 30,230 | 11,921 | 151 | 65 | 382 | 82 | 26,418 | 6,802 | 21,658 | 4,717 | 102,426 | 71 | 167 | 10,874 | 19,781 | ..... | 95 | 632 |
| | | Alienated ... ... | 318 | 203 | ... | ... | ..... | ... | 196 | 41 | 160 | 25 | 943 | 1 | ..... | 131 | 242 | ..... | 5 | 12 |
| | | Total ... | 68,033 | 30,377 | 360 | 137 | 3,719 | 804 | 61,047 | 18,390 | 52,201 | 13,479 | 248,547 | 644 | 1,043 | 27,043 | 45,378 | ... | 1,248 | 4,799 |
| 17 | Ratnágiri ... | Rayatwári ... ... | 11,402 | 2,583 | 13 | 7 | 731 | 85 | 6,395 | 2,344 | 4,654 | 1,331 | 29,545 | 32 | 155 | 2,388 | 7,015 | ..... | 19 | 614 |
| | | Other Government . | 35,552 | 7,823 | 13 | 5 | 382 | 22 | 24,039 | 7,428 | 21,064 | 5,318 | 101,646 | 93 | 255 | 6,233 | 21,902 | ..... | 59 | 264 |
| | | Alienated ... ... | 309 | 102 | 1 | 1 | 2 | 1 | 314 | 96 | 236 | 69 | 1,131 | 1 | ..... | 35 | 205 | ..... | ... | ... |
| | | Total ... | 47,263 | 10,508 | 27 | 13 | 1,115 | 108 | 30,748 | 9,868 | 25,954 | 6,718 | 132,322 | 126 | 410 | 8,656 | 29,122 | ... | 78 | 878 |
| 18 | Kánara ... | Rayatwári ... ... | 80,233 | 27,116 | 558 | 139 | 5,773 | 1,390 | 81,258 | 27,263 | 57,576 | 11,388 | 292,694 | 291 | 1,790 | 3,618 | 47,743 | ..... | 75 | 5,769 |
| | | Other Government . | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Total ... | 80,233 | 27,116 | 558 | 139 | 5,773 | 1,390 | 81,258 | 27,263 | 57,576 | 11,388 | 292,694 | 291 | 1,790 | 3,618 | 47,743 | ... | 75 | 5,769 |
| | Total A. ... | Rayatwári ... ... | 2,518,619 | 225,754 | 15,551 | 3,983 | 118,301 | 19,241 | 1,638,360 | 772,397 | 1,327,224 | 509,548 | 7,149,478 | 123,750 | 1,744,572 | 1,118,432 | 751,804 | 164,618 | 84,493 | 346,995 |
| | | Other Government . | 181,901 | 20,750 | 1,072 | 409 | 2,746 | 406 | 126,728 | 84,475 | 91,871 | 48,963 | 559,321 | 4,366 | 26,987 | 53,212 | 100,169 | 11 | 1,289 | 22,057 |
| | | Alienated ... ... | 231,858 | 16,942 | 1,039 | 263 | 7,278 | 1,512 | 141,686 | 61,206 | 108,534 | 40,315 | 610,633 | 12,012 | 224,102 | 112,648 | 45,709 | 21,860 | 3,378 | 24,451 |
| | | Grand Total ... | 2,932,378 | 263,446 | 17,662 | 4,655 | 128,325 | 21,159 | 1,906,774 | 918,578 | 1,527,629 | 598,826 | 8,319,432 | 140,128 | 1,995,661 | 1,284,292 | 897,682 | 186,489 | 89,160 | 393,503 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | Not available. | | | | | | | | | | | | | | | | | |
| 20 | Hyderabad ... ... ... | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur ... ... ... ... | | | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier ... ... | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar ... ... ... | | | | | | | | | | | | | | | | | | | |

## Accompaniment A to Return III.

*Details of Kharif and Rabi under Cereals and Pulses, 1890-91.*

| No. | District. | | Class I.—(Cereals). Jowári, Sorghum Vulgare. | Bájri, Pennisetum Typhoideum. | Rice. | Wheat. | Barley. | Maize. | Kodra, Paspalum Scrobiculatum. | Ragi, Eleusine Coracana. | Rále, Panicum Italicum. | Vari, P. Millare. | Banti, P. flavidum. | Bhadli, P. pilosum. | Rájgira, Amaranth. | Others. | Total Cereals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Kharif ... | 305,142 | 247,714 | 61,759 | ..... | ..... | 3,437 | 18,945 | 3,255 | ..... | 7,142 | 21,597 | ..... | ..... | ..... | 668,091 |
| | | Rabi ... ... | ..... | ..... | ..... | 153,173 | 15,737 | ..... | ..... | ..... | 269 | ..... | ..... | ..... | 14 | ..... | 169,193 |
| | | Total ... | 305,142 | 247,714 | 61,759 | 153,173 | 15,737 | 3,437 | 18,945 | 3,255 | 269 | 7,142 | 21,597 | ... | 14 | ... | 838,184 |
| 2 | Kaira ... ... | Kharif... ... | 52,050 | 224,089 | 104,779 | ..... | ..... | 367 | 111,947 | 59,100 | ..... | ..... | 1,814 | ..... | ..... | 268 | 554,414 |
| | | Rabi ... ... | 3,862 | 4 | ..... | 12,470 | 7,396 | ..... | ..... | ..... | 320 | 661 | ..... | ..... | 138 | ..... | 24,851 |
| | | Total ... | 55,912 | 224,093 | 104,779 | 12,470 | 7,396 | 367 | 111,947 | 59,100 | 320 | 661 | 1,814 | ... | 138 | 268 | 579,265 |
| 3 | Panch Maháls ... | Kharif ... | 4,171 | 42,986 | 50,567 | ..... | ..... | 91,695 | 23,864 | 16,321 | 33 | 2,255 | 16,653 | 535 | 18 | 1,671 | 250,769 |
| | | Rabi ... ... | 3 | ..... | 4 | 9,441 | 1,179 | 3 | ..... | ..... | ..... | ..... | 5 | ..... | 2 | ..... | 10,637 |
| | | Total .. | 4,174 | 42,986 | 50,571 | 9,441 | 1,179 | 91,698 | 23,864 | 16,321 | 33 | 2,255 | 16,658 | 535 | 20 | 1,671 | 261,406 |
| 4 | Broach ... ... | Kharif ... | 12,117 | 20,879 | 14,659 | ..... | ..... | 16 | 6,497 | 186 | 8 | 1 | ..... | ..... | 2 | 310 | 54,675 |
| | | Rabi ... ... | 79,293 | ..... | ..... | 53,661 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 132,954 |
| | | Total ... | 91,410 | 20,879 | 14,659 | 53,661 | ... | 16 | 6,497 | 186 | 8 | 1 | ... | ... | 2 | 310 | 187,629 |
| 5 | Surat ... ... | Kharif ... | 99,221 | 7,836 | 103,690 | ..... | ..... | ..... | 33,030 | 12,879 | 2 | 92 | 1,014 | 216 | 4 | 380 | 258,364 |
| | | Rabi ... ... | 242 | ..... | ..... | 31,395 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 31,638 |
| | | Total ... | 99,463 | 7,836 | 103,690 | 31,395 | ... | ... | 33,030 | 12,879 | 2 | 92 | 1,014 | 216 | 5 | 380 | 290,002 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Kharif ... | 524,173 | 707,992 | 20,785 | ..... | ..... | 2,821 | 4,289 | 12,811 | 356 | 5,286 | 4,286 | 1,663 | 334 | 120 | 1,290,916 |
| | | Rabi ... ... | ..... | ..... | ..... | 211,335 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 211,341 |
| | | Total .. | 524,173 | 707,992 | 26,785 | 211,335 | 6 | 2,821 | 4,289 | 12,811 | 356 | 5,286 | 4,286 | 1,663 | 334 | 120 | 1,502,257 |
| 7 | Násik ... ... | Kharif ... | 120,505 | 801,799 | 53,849 | ..... | ..... | 2,813 | ..... | 156,650 | 1,283 | 44,161 | 1,774 | 1,936 | 190 | ..... | 1,184,960 |
| | | Rabi ... ... | 15,290 | ..... | ..... | 348,713 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 364,003 |
| | | Total ... | 135,795 | 801,799 | 53,849 | 348,713 | ... | 2,813 | ... | 156,650 | 1,283 | 44,161 | 1,774 | 1,936 | 190 | ... | 1,548,963 |
| 8 | Ahmadnagar ... | Kharif ... | ..... | 706,917 | 12,292 | ..... | 186 | 783 | 189 | 32,876 | 990 | 11,363 | 225 | 4,537 | 355 | 494 | 771,207 |
| | | Rabi ... ... | 1,239,527 | ..... | ..... | 284,492 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,524,019 |
| | | Total ... | 1,239,527 | 706,917 | 12,292 | 284,492 | 186 | 783 | 189 | 32,876 | 990 | 11,363 | 225 | 4,537 | 355 | 494 | 2,295,226 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... | Kharif ... | 94,736 | 643'454 | 64,631 | ..... | 596 | 2,196 | 23 | 61,643 | 2,026 | 39,039 | 270 | 9,397 | 478 | 2,389 | 920,878 |
| | | Rabi ... | 771,272 | ..... | ..... | 111,740 | 342 | 33 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 516 | 883,903 |
| | | Total ... | 866,008 | 643,454 | 64,631 | 111,740 | 938 | 2,229 | 23 | 61,643 | 2,026 | 39,039 | 270 | 9,397 | 478 | 2,905 | 1,804,781 |
| 10 | Sholápur ... | Kharif ... | ..... | 115,284 | 16,249 | ..... | ..... | 13,695 | 1 | 45 | 1,097 | 1,596 | ..... | 267 | 56 | 9,095 | 157,385 |
| | | Rabi ... | 1,519,918 | ..... | ..... | 55,333 | 951 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,576,202 |
| | | Total .. | 1,519,918 | 115,284 | 16,249 | 55,333 | 951 | 13,695 | 1 | 45 | 1,097 | 1,596 | ... | 267 | 56 | 9,095 | 1,733,587 |
| 11 | Sátára ... | Kharif ... | 307,897 | 544,919 | 41,740 | ..... | ..... | 9,156 | 68 | 67,092 | 30,712 | 51,976 | 391 | ..... | 714 | 5,940 | 1,060,605 |
| | | Rabi ... | 293,225 | ..... | ..... | 62,181 | 5,492 | 781 | ..... | ..... | 15 | ..... | ..... | ..... | ..... | ..... | 361,694 |
| | | Total ... | 601,122 | 544,919 | 41,740 | 62,181 | 5,492 | 9,937 | 68 | 67,092 | 30,727 | 51,976 | 391 | ... | 714 | 5,940 | 1,422,299 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Kharif ... | 438,034 | 145,678 | 112,897 | ..... | ..... | 7,309 | 38 | 51,800 | 84,180 | 29,534 | ..... | ..... | 2 | 26 | 869,498 |
| | | Rabi ... | 309,842 | ..... | ..... | 114,062 | 78 | 23 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 424,005 |
| | | Total ... | 747,876 | 145,678 | 112,897 | 114,062 | 78 | 7,332 | 38 | 51,800 | 84,180 | 29,534 | ... | ... | 2 | 26 | 1,293,503 |
| 13 | Bijápur ... | Kharif ... | 313,187 | 234,768 | 6,795 | ..... | ..... | 915 | 46 | 138 | 33,946 | 8,926 | ..... | ..... | 3 | 31 | 598,737 |
| | | Rabi ... | 1,196,823 | ..... | ..... | 172,402 | 4 | ..... | ..... | ..... | 68 | ..... | ..... | ..... | ..... | ..... | 1,369,297 |
| | | Total ... | 1,510,010 | 234,768 | 6,795 | 172,402 | 4 | 915 | 46 | 138 | 34,014 | 8,926 | ... | ... | 3 | 13 | 1 968,034 |
| 14 | Dhárwár ... | Kharif ... | 453,433 | 5,037 | 154,243 | ..... | 12 | 31 | 8 | 45,812 | 84,799 | 28,422 | ..... | ..... | 1 | ..... | 771,798 |
| | | Rabi ... | 167,107 | ..... | ..... | 292,277 | ..... | ..... | ..... | ..... | 2,032 | 234 | ..... | ..... | ..... | ..... | 461,650 |
| | | Total ... | 620,540 | 5,037 | 154,243 | 292,277 | 12 | 31 | 8 | 45,812 | 86,831 | 28,656 | ... | ... | 1 | ..... | 1,233,448 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Kharif ... | 7 | ..... | 336,552 | 126 | ..... | 69 | 13,240 | 72,306 | ..... | 32,469 | ..... | ..... | ..... | ..... | 454,766 |
| | | Rabi ... | ..... | ..... | 172 | 2 | ..... | ..... | ..... | 6 | ..... | 7 | ..... | ..... | ..... | ..... | 187 |
| | | Total ... | 7 | ... | 336,724 | 128 | ... | 69 | 13,240 | 72,312 | ... | 32,476 | ... | ... | ... | ..... | 454,956 |
| 16 | Kolába ... | Kharif ... | ..... | ..... | 197,312 | ..... | ..... | ..... | 18,608 | 56,251 | ..... | 44,120 | ..... | ..... | ..... | ..... | 316,291 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 197,312 | ... | ... | ... | 18,608 | 56,251 | ... | 44,120 | ... | ... | ... | ..... | 316,291 |
| 17 | Ratnágiri ... | Kharif ... | ..... | ..... | 35,743 | ..... | ..... | ..... | 22,100 | 27,547 | ..... | 16,673 | ..... | ..... | ..... | 53 | 102,116 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 35,743 | ... | ... | ... | 22,100 | 27,547 | ... | 16,673 | ... | ... | ... | 53 | 102,116 |
| 18 | Kánara ... | Kharif ... | 1,055 | ..... | 182,535 | ..... | ..... | 9 | ..... | 5,257 | 121 | 342 | ..... | ..... | ..... | ..... | 189,319 |
| | | Rabi ... | ..... | ..... | 13,654 | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 13,656 |
| | | Total ... | 1,055 | ... | 196,189 | ... | ... | 11 | ... | 5,257 | 121 | 342 | ... | ... | ... | ..... | 202,975 |
| | Grand Total ... | Kharif ... | 2,725,728 | 4,449,352 | 1,577,077 | 126 | 794 | 135,312 | 252,893 | 681,969 | 239,553 | 323,397 | 48,024 | 18,551 | 2,157 | 20,759 | 10,475,692 |
| | | Rabi ... | 5,596,404 | 4 | 13,830 | 1,912,677 | 31,185 | 842 | ..... | 6 | 2,704 | 902 | 5 | ..... | 155 | 516 | 7,559,230 |
| | | Total ... | 8,322,132 | 4,449,356 | 1,590,907 | 1,912,803 | 31,979 | 136,154 | 252,893 | 681,975 | 242,257 | 324,299 | 48,029 | 18,551 | 2,312 | 21,275 | 18,034,922 |

*Details of Kharif and Rabi under Cereals and Pulses, 1890-91.*

| No. | District. | | CLASS II.—(PULSES). | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur, Cajanus Indicus. | Gram, Cicer aretinum. | Mug, Phaseolus mungo. | Udid, P. radiatus. | Math, P. aconitifolius. | Vál, Dolichos lablab. | Chavli, D. catiang. | Kulith, D. uniflorus. | Vátáne, Pisum sativum. | Lentil, (Masur). | Lákh (Láng) Chickling, vetch. | Field Vetch (Guvár). | Others. | Total Pulses. |
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... ... | Kharif ... ... | 3,029 | ..... | 11,502 | 5,671 | 46,355 | 160 | 1,428 | 4,286 | ..... | ..... | ..... | 8,064 | ..... | 80,495 |
| | | Rabi... ... ... | ..... | 10,285 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10,285 |
| | | Total ... | 3,029 | 10,285 | 11,502 | 5,671 | 46,355 | 160 | 1,428 | 4,286 | ..... | ..... | ..... | 8,064 | ..... | 90,780 |
| 2 | Kaira ... ... ... | Kharif ... ... | 26,290 | ..... | 4,839 | 1,296 | 30,001 | 848 | 4,866 | ..... | ..... | ..... | ..... | 10,985 | ..... | 79,125 |
| | | Rabi... ... ... | 40 | 4,609 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4,649 |
| | | Total ... | 26,330 | 4,609 | 4,839 | 1,296 | 30,001 | 848 | 4,866 | ..... | ..... | ..... | ..... | 10,985 | ..... | 83,774 |
| 3 | Panch Maháls ... ... | Kharif ... ... | 6,891 | ..... | 3,102 | 7,272 | 3,220 | 151 | 550 | 77 | ..... | ..... | ..... | 897 | ..... | 22,160 |
| | | Rabi ... ... ... | ..... | 40,664 | ..... | ..... | ..... | ..... | ..... | ..... | 2,320 | ..... | ..... | ..... | ..... | 42,984 |
| | | Total ... | 6,891 | 40,664 | 3,102 | 7,272 | 3,220 | 151 | 550 | 77 | 2,320 | ..... | ..... | 897 | ..... | 65,144 |
| 4 | Broach ... ... ... | Kharif ... ... | 5,079 | ..... | 308 | 20 | 3,159 | 157 | 129 | ..... | ..... | ..... | ..... | 246 | ..... | 9,098 |
| | | Rabi... ... ... | 8,516 | 782 | 7 | ..... | 17 | 648 | 30 | ..... | 558 | ..... | 34,198 | 8 | ..... | 44,764 |
| | | Total ... | 13,595 | 782 | 315 | 20 | 3,176 | 805 | 159 | ..... | 558 | ..... | 34,198 | 254 | ..... | 53,862 |
| 5 | Surat ... ... ... | Kharif ... ... | 22,480 | ..... | 2,592 | 3,065 | 362 | 500 | 733 | ..... | ..... | ..... | ..... | 1,830 | ..... | 31,562 |
| | | Rabi ... .. ... | 1,477 | 2,447 | 507 | ..... | ..... | 44,992 | ..... | ..... | 3,913 | 5 | 4,049 | ..... | ..... | 57,390 |
| | | Total ... | 23,957 | 2,447 | 3,099 | 3,065 | 362 | 45,492 | 733 | ..... | 3,913 | 5 | 4,049 | 1,830 | ..... | 88,952 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | Kharif ... ... | 65,068 | ..... | 4,911 | 21,117 | 3,057 | 169 | 1,249 | 56,684 | ..... | 696 | ..... | ..... | ..... | 152,951 |
| | | Rabi... ... ... | ..... | 38,028 | ..... | ..... | ..... | ..... | ..... | ..... | 2,604 | ..... | 110 | ..... | ..... | 40,742 |
| | | Total ... | 65,068 | 38,028 | 4,911 | 21,117 | 3,057 | 169 | 1,249 | 56,684 | 2,604 | 696 | 110 | ..... | ..... | 193,693 |
| 7 | Násik ... ... .. | Kharif ... ... | 27,130 | ..... | 1,017 | 23,682 | 1,070 | 8 | 18 | 64,965 | ..... | ..... | ..... | ..... | ..... | 117,890 |
| | | Rabi ... ... ... | ..... | 80,444 | ..... | ..... | ..... | ..... | ..... | ..... | 2,418 | 9,152 | 3,847 | ..... | ..... | 95,861 |
| | | Total ... | 27,130 | 80,444 | 1,017 | 23,682 | 1,070 | 8 | 18 | 64,965 | 2,418 | 9,152 | 3,847 | ..... | ..... | 213,751 |
| 8 | Ahmadnagar ... ... | Kharif ... ... | 32,225 | ..... | 7,843 | 2,482 | 12,951 | 825 | 58 | 31,223 | 1,277 | 506 | 73 | ..... | 405 | 89,868 |
| | | Rabi ... ... ... | ..... | 113,178 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 113,178 |
| | | Total ... | 32,225 | 113,178 | 7,843 | 2,482 | 12,951 | 825 | 58 | 31,223 | 1,277 | 506 | 73 | ..... | 405 | 203,046 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... ... | Kharif ... ... | 27,703 | ..... | 1,715 | 4,163 | 21,986 | 119 | 62 | 25,702 | 124 | 13 | 70 | ..... | ..... | 81,657 |
| | | Rabi ... ... | ..... | 88,133 | ..... | ..... | ..... | 4,394 | 260 | 1,797 | 1,771 | 1,289 | ..... | ..... | ..... | 97,644 |
| | | Total ... | 27,703 | 88,133 | 1,715 | 4,163 | 21,986 | 4,513 | 322 | 27,499 | 1,895 | 1,302 | 70 | ..... | ..... | 179,301 |
| 10 | Sholápur ... ... ... | Kharif ... ... | 48,146 | ..... | 2,949 | 832 | 13,140 | 50 | 15 | 5,085 | ..... | ..... | ..... | ..... | 2 | 70,219 |
| | | Rabi ... ... | ..... | 70,008 | ..... | ..... | ..... | ..... | ..... | ..... | 68 | 43 | 306 | ..... | ..... | 70,425 |
| | | Total ... | 48,146 | 70,008 | 2,949 | 832 | 13,140 | 50 | 15 | 5,085 | 68 | 43 | 306 | ..... | 2 | 140,644 |
| 11 | Sátára ... ... ... | Kharif ... ... | 64,743 | ..... | 12,854 | 31,312 | 60,574 | 3,902 | 749 | 44,667 | ..... | ..... | ..... | ..... | 2 | 218,803 |
| | | Rabi ... ... | ..... | 87,146 | ..... | ..... | ..... | ..... | ..... | ..... | 1,922 | 734 | ..... | ..... | ..... | 89,802 |
| | | Total ... | 64,743 | 87,146 | 12,854 | 31,312 | 60,574 | 3,902 | 749 | 44,667 | 1,922 | 734 | ..... | ..... | 2 | 308,605 |
| | III.—*Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | Kharif ... ... | 57,272 | ..... | 7,986 | 2,282 | 4,103 | 1,686 | 279 | 49,879 | ..... | ..... | ..... | ..... | ..... | 123,487 |
| | | Rabi ... ... | ..... | 52,629 | 87 | ..... | ..... | 5,188 | ..... | 26 | 5,817 | 5,665 | ..... | ..... | ..... | 69,412 |
| | | Total ... | 57,272 | 52,629 | 8,073 | 2,282 | 4,103 | 6,874 | 279 | 49,905 | 5,817 | 5,665 | ..... | ..... | ..... | 192,899 |
| 13 | Bijápur ... ... ... | Kharif ... ... | 62,328 | ..... | 24,713 | 6 | 4,931 | 3,371 | 2,990 | 29,452 | ..... | ..... | ..... | ..... | ..... | 127,791 |
| | | Rabi ... ... | 147 | 61,805 | 11 | ..... | 17 | 768 | ..... | 155 | 47 | ..... | ..... | ..... | ..... | 62,950 |
| | | Total ... | 62,475 | 61,805 | 24,724 | 6 | 4,948 | 4,139 | 2,990 | 29,607 | 47 | ... | ..... | ..... | ..... | 190,741 |
| 14 | Dhárwár ... ... ... | Kharif ... ... | 55,439 | 323 | 35,585 | 2,008 | 9,689 | 4,423 | 849 | 36,155 | ..... | ..... | ..... | ..... | ..... | 144,471 |
| | | Rabi ... ... | ..... | 48,046 | 5,909 | 732 | 2 | 1,769 | ..... | 8,145 | 544 | 86 | ..... | ..... | ..... | 65,233 |
| | | Total ... | 55,439 | 48,369 | 41,494 | 2,740 | 9,691 | 6,192 | 849 | 44,300 | 544 | 86 | ..... | ..... | ..... | 209,704 |
| | V.—*Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... | Kharif ... ... | 7,593 | 627 | 526 | 22,146 | ..... | 2,699 | 4,467 | 1,053 | 159 | ..... | 111 | ..... | ..... | 39,381 |
| | | Rabi ... ... | 89 | 1,991 | 174 | 8 | ..... | 1,726 | ..... | ..... | 2 | ..... | ..... | ..... | ..... | 3,990 |
| | | Total ... | 7,682 | 2,618 | 700 | 22,154 | ..... | 4,425 | 4,467 | 1,053 | 161 | ..... | 111 | ..... | ..... | 43,371 |
| 16 | Kolába ... ... ... | Kharif ... ... | 428 | ..... | ..... | 2,335 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2,763 |
| | | Rabi ... ... | 1,572 | 2,752 | 2,295 | 5,142 | ..... | 7,501 | 80 | ..... | 4 | ..... | ..... | ..... | ..... | 19,346 |
| | | Total ... | 2,000 | 2,752 | 2,295 | 7,477 | ..... | 7,501 | 80 | ... | 4 | ..... | ..... | ..... | ..... | 22,109 |
| 17 | Ratnágiri ... ... | Kharif ... ... | 485 | 39 | 163 | 1,528 | ..... | 2,611 | 37 | 2,118 | ..... | ..... | ..... | ..... | 215 | 7,196 |
| | | Rabi ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 485 | 39 | 163 | 1,528 | ..... | 2,611 | 37 | 2,118 | ..... | ..... | ..... | ..... | 215 | 7,196 |
| 18 | Kánara ... ... ... | Kharif ... ... | 139 | 85 | 42 | 279 | ..... | 17 | 9 | 1,498 | 133 | 3 | ..... | ..... | 1 | 2,206 |
| | | Rabi ... ... | ..... | 227 | 1,283 | 1,364 | 1 | 57 | 277 | 191 | 232 | 1 | ..... | ..... | ..... | 3,633 |
| | | Total ... | 139 | 312 | 1,325 | 1,643 | 1 | 74 | 286 | 1,689 | 365 | 4 | ..... | ..... | 1 | 5,839 |
| | Grand Total ... | Kharif ... ... | 512,468 | 1,074 | 122,647 | 131,496 | 214,598 | 21,696 | 18,488 | 352,844 | 1,693 | 1,218 | 254 | 22,022 | 625 | 1,401,123 |
| | | Rabi ... ... | 11,841 | 703,174 | 10,273 | 7,246 | 37 | 67,043 | 647 | 10,314 | 22,220 | 16,975 | 42,510 | 8 | ..... | 892,288 |
| | | Total ... | 524,309 | 704,248 | 132,920 | 138,742 | 214,635 | 88,739 | 19,135 | 363,158 | 23,913 | 18,193 | 42,764 | 22,030 | 625 | 2,293,411 |

## Accompaniment B to Return III.

*Number of principal Fruit-bearing Trees, 1890-91.*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|
| | **A.—Bombay Presidency Proper.** | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... | 54,032 | 10,841 | ... | ... | 51 | 1,040 |
| 2 | Kaira ... ... | 219,099 | 20,984 | ... | 30 | 15 | ... |
| 3 | Panch Maháls ... | 40,827 | 5,986 | ... | ... | 129,734 | ... |
| 4 | Broach ... ... | 23,423 | 6,425 | 3 | 87 | 33,160 | 1,311 |
| 5 | Surat ... ... | 177,188 | 72,737 | 3,563 | 6,716 | 74,023 | 644,910 |
| | Total ... | 514,569 | 116,973 | 3,566 | 6,833 | 236,983 | 647,261 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 191,708 | 12,884 | 8 | 126 | 1,706 | ... |
| 7 | Násik ... ... | 155,224 | 7,552 | 48 | 201 | 53 | 42,411 |
| 8 | Ahmadnagar ... | 59,785 | 9,083 | 13 | 570 | ... | 721 |
| 9 | Poona ... ... | 117,963 | 7,558 | 707 | 1,397 | 8,573 | ... |
| 10 | Sholápur ... ... | 31,779 | 7,303 | ... | 150 | 2 | 66,683 |
| 11 | Sátára ... ... | 173,781 | 11,434 | 8,909 | 4,620 | ... | ... |
| | Total ... | 730,240 | 55,814 | 9,685 | 7,064 | 10,334 | 109,815 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... .. | 115,949 | 21,329 | 10,618 | 1,838 | ... | 8,017 |
| 13 | Bijápur ... ... | 73,236 | 24,931 | 49 | 2,198 | 113 | 436,022 |
| 14 | Dhárwár ... ... | 166,885 | 56,537 | 8,760 | 62,613 | 4 | 522,541 |
| | Total ... | 356,070 | 102,797 | 19,427 | 66,649 | 117 | 966,580 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... | 171,297 | 14,883 | 2,874 | 87,622 | 69,490 | 12,528 |
| 16 | Kolába ... ... | 73,147 | 4,140 | 4,399 | 90,451 | 19,000 | 30 |
| 17 | Ratnágiri ... ... | 53,956 | 2,206 | 28,721 | 142,473 | ... | ... |
| 18 | Kánara ... ... | 115,982 | 11,126 | 80,567 | 1,002,392 | ... | ... |
| | Total ... | 414,382 | 32,355 | 116,561 | 1,322,938 | 88,490 | 12,558 |
| | Total, A ... | 2,015,261 | 307,939 | 149,239 | 1,403,484 | 335,924 | 1,736,214 |
| | **B.—Sind.** | | | | | | |
| 19 | Karáchi ... ... | 37,909 | 86 | ... | 1,062 | ... | 555 |
| 20 | Hyderabad ... ... | 95,664 | 12 | ... | ... | ... | 1,462 |
| 21 | Shikárpur ... ... | 47,401 | 20 | ... | ... | ... | 148,321 |
| 22 | Upper Sind Frontier. | 1,438 | .. | ... | ... | ... | 739 |
| 23 | Thar and Párkar ... | 3,347 | ... | ... | ... | ... | .... |
| | Total, B ... | 185,759 | 118 | ... | 1,062 | ... | 151,077 |
| | Grand Total ... | 2,201,020 | 308,057 | 149,239 | 1,404,546 | 335,924 | 1,887,291 |

# STATISTICS.

## B.—RAINFALL

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | 1st January—10th April |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini ... ... | 11th April—24th April. |
| | Bharani ... ... | 25th April—8th May. |
| | Krittika ... ... | 9th May—22nd May. |
| | Rohini ... ... | 23rd May—4th June. |
| Monsoon-Kharíf— | | |
| 5th June to 14th August. | Mrig... ... ... | 5th June—19th June. |
| | Ardra ... ... | 20th June—3rd July. |
| | Punarvasu ... ... | 4th July—17th July. |
| | Pushya ... ... | 18th July—31st July. |
| | Ashlesha ... ... | 1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct.. | Magha ... ... | 15th August—27th August. |
| | Purva ... ... | 28th August—10th September. |
| | Uttara ... ... | 11th September—24th September. |
| | Hast ... ... | 25th September—7th October. |
| | Chitra ... ... | 8th October—21st October. |
| Late Rains— | | |
| 22nd Oct. to 30th Nov. ... | Sváti ... ... | 22nd October—3rd November. |
| | Vishákha ... ... | 4th November—17th November. |
| | Anurádha ... ... | 18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1886, except for very few stations. The rainy day being now defined under the Government of India's orders as a day with a rainfall of 10 cents or more instead of 1 cent or more as before, no comparison of rainy days with those of the last year can be made.

The anna valuation given in the remarks is on the basis of 16 annas representing an average crop.

## Synopsis of Rainfall Summary, 1890-91.

| District. | Kharif. | | Rabi. | | General Remarks as to Rain. |
|---|---|---|---|---|---|
| | Rain. | Harvest. | Rain. | Harvest. | |
| West Khándesh ... | Seasonable ... | Fairly good ... | Hast deficient ... | Good in west, fair in north, poor in Sindkheda. | Below or up to average. |
| East Khándesh ... | Seasonable and sufficient. | Good or very good. | Sowing rain scant but good after. | Fair, oil-seeds poor. | Do. |
| Násik ... ... | Good in west, deficient elsewhere. | Fairly good, except in south and east, where poor. | Seasonable ... | Good except Sinnar and Málegaon. | Do. |
| Ahmadnagar ... | Late and deficient. | Fair, but very poor in south. | Sufficient and seasonable. | Fair to good ... | Below average. |
| Poona ... .. | Good in Mával, short in Desh. | Fair ... ... | Seasonable, but long breaks in Chitra and Svâti. | Fair ... ... | Up to average. Vishákha most beneficial. December rain unusually heavy in south-east. |
| Sholápur ... ... | Good at first, but long breaks. | Very poor, except Bársi | Very seasonable and sufficient. | Excellent, kardai slightly suffered from blight. | Below average in south ; above in north. |
| Sátára ... ... | Good in west and centre. Scant in east. | Fair ... ... | Seasonable ... | Fair to good ... | Below or up to average. |
| Belgaum ... ... | Late and long breaks except in west. | Fairly good in west. Poor to fair elsewhere. | Good except Athni & Saundatti. | Do. .. | Up to average. |
| Bijápur ... ... | Good at first, break injuriously long. | Fair ... ... | Seasonable ... | Fairly good, but cotton poor. | Up to or above average. Slight damage by locusts in Indi and Sindgi. |
| Dhárwár ... ... | Good at first, but long breaks. | Do. ... ... | Do. Sváti and Vishâkha too heavy in south. | Fair. Cotton affected by blight. | Average. |
| Kánara ... ... | Seasonable ... | Do. ... ... | Seasonable ... | Fair ... ... | Up to or above average. |
| Ratnágiri ... | Very seasonable. | Fairly good .. | Do. Chitra injuriously heavy | Do. ... | Above average. |
| Kolába ... ... | Do. ... | Do. ... | Do. ... | Do. ... | Above average. Late rain injuriously heavy. |
| Thána ... . | Do. .. | Very good ... | Very seasonable. | Very good ... | Above average. |
| Surat ... ... | Abnormally heavy at first. | Fair to good ... | Seasonable, but not sufficient. | Fair ... ... | Below average except north and south. |
| Broach ... ... | Seasonable ... | Do. ... | Good at first, but closed too soon. | Do. ... ... | Below average. Slight damage by locusts in places. |
| Kaira ... .. | Do. ... | Fairly good ... | Short ... ... | Poor ... ... | Below average. Rice suffered in outturn. |
| Panch Mahál ... | Do. ... | Do. Rice poor. | Do. ... | Do. ... ... | Below average. |
| Ahmadabad ... | Do. ... | Do. ... | Do. ... | Poor to fair ... | Below average. Rabi crops suffered from frost and blight. |

## West Khándesh, 1890.

| Rain Periods. | Dhulia. | | Pimpalner. | | Nandurbár. | | Navápur. | | Taloda. | | Sháháda. | | Shirpur. | | Sindkheda. | | Amalner. | | Párola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·03 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 2·38 | 4 | 2·14 | 2 | 1·48 | 2 | 1·04 | 2 | 0·57 | 1 | 0·52 | 2 | 1·27 | 3 | 0·67 | 2 | 1·83 | 3 | 5·35 | 4 |
| Monsoon-Kharif ... | 14·56 | 21 | 7·78 | 21 | 14·10 | 37 | 28·37 | 47 | 19·66 | 43 | 12·73 | 31 | 9·93 | 30 | 9·48 | 16 | 17·70 | 30 | 16·56 | 32 |
| Monsoon-Rabi ... | 6·44 | 8 | 6·02 | 10 | 5·94 | 14 | 13·76 | 14 | 6·53 | 12 | 10·19 | 14 | 4·52 | 8 | 2·73 | 8 | 5·10 | 8 | 8·33 | 12 |
| Late Rains ... ... | 1·83 | 4 | 0·40 | 1 | 1·99 | 2 | 0·22 | 1 | 0·62 | 2 | 1·05 | 1 | 0·36 | 1 | 1·17 | 1 | 1·29 | 2 | 1·77 | 5 |
| Total | 25·24 | 37 | 16·34 | 34 | 23·51 | 55 | 43·39 | 64 | 27·38 | 58 | 24·49 | 48 | 16·08 | 42 | 14·05 | 27 | 25·92 | 43 | 32·01 | 53 |
| Average ... | 25·79 | ... | 27·42 | ... | 32·67 | ... | ... | ... | 34·96 | ... | 31·56 | ... | 27·56 | ... | 22·95 | ... | 28·05 | ... | 32·08 | ... |

*General characteristics.*—A hilly and rugged tract except where the wide black soil plains extend on either side of the Tápti and its tributaries. Rainfall very heavy in the dángs.

*Remarks.*—Rainfall generally below average. Ante-monsoon showers in Rohini were favourable for preparing land. Monsoon broke in second week of June and partial sowings commenced. General heavy rain after 15th of June, throughout sufficient for sowing of cotton, jowári, tili, &c. July rain, though light, was on the whole sufficient and seasonable for completing kharíf sowings and for weeding, except in south, where bájri sowing delayed and crops began to suffer for want of moisture. A'shlesha rain in 1st half of August was throughout beneficial. A break followed, which was favourable at first, but continued too long until relieved by general heavy rain of Purva and Uttara in second week of September. This September rain was very beneficial to all standing crops and for preparing land for rabi. Hast rain was favourable for rabi sowing but generally deficient. Light to fair showers of Vishákha in early November and light showers again in December, though slightly harmful to cotton, were generally favourable to rabi crops. Season was on the whole fairly good. Kharíf outturn estimated at cotton 8 to 16 annas ; jowári, bájri and other crops 8 to 14 annas ; rabi outturn was good (14 annas) in west ; fair (10 annas) in north, elsewhere poor (4 to 8 annas) especially in Shirpur and Sindkheda, where very poor (2 to 6 annas).

## East Khándesh, 1890.

| Rain Periods. | Chálisgaon. | | Páchora. | | Bhadgaon. | | Erandol. | | Chopda. | | Jalgaon. | | Jámner. | | Bhusa'val. | | Edalabad. | | Sa'vda. | | Ya'val. | | Ra'ver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·01 | ... | ... | ... | 0·02 | ... | ... | ... | ... | ... | 0·03 | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 1·74 | 4 | ... | .. | 1·21 | 1 | 2·46 | 5 | 0·43 | 4 | 0·23 | 2 | 3·47 | 2 | 0·52 | 1 | ... | ... | 0·05 | ... | ... | ... | 0·49 | 1 |
| Monsoon-Kharif... | 19·20 | 24 | 24·27 | 36 | 21·91 | 36 | 25·48 | 48 | 19·30 | 35 | 18·88 | 39 | 19·94 | 32 | 18·70 | 30 | 16·28 | 26 | 17·80 | 28 | 15·55 | 31 | 16·89 | 22 |
| Monsoon-Rabi ... | 5·85 | 13 | 7·97 | 9 | 3·49 | 8 | 7·67 | 13 | 6·04 | 8 | 4·98 | 10 | 8·00 | 13 | 6·94 | 7 | 5·79 | 11 | 3·94 | 9 | 5·02 | 7 | 4·79 | 10 |
| Late Rains ... | 2·01 | 3 | 1·40 | 3 | 1·66 | 3 | 1·42 | 4 | 1·22 | 2 | 1·71 | 2 | 1·30 | 3 | 0·65 | 2 | 0·90 | 2 | 0·86 | 1 | 0·50 | 2 | 4·71 | 2 |
| Total ... | 28·80 | 44 | 33·64 | 48 | 28·27 | 48 | 37·03 | 70 | 27·00 | 49 | 25·80 | 53 | 32·73 | 50 | 26·81 | 40 | 22·97 | 39 | 22·68 | 38 | 21·07 | 40 | 26·88 | 35 |
| Average ... | 29·70 | ... | 29·51 | ... | 31·29 | ... | 31·12 | ... | 31·58 | ... | 33·42 | ... | 34·84 | ... | 35·18 | ... | 28·78 | ... | 28·95 | ... | 34·44 | ... | 33·56 | ... |

*General characteristics.*—In the north, high hills of the Sátpudas. The southern and western portions are also hilly but the hills less high, and continuous. Drainage by the Tápti, the Girna and the Purna. Rainfall larger than in the West Khándesh but less certain.

*Remarks.*—Rainfall below average in north-east and up to average in south-west. Fair preparatory showers except in northern tálukás. Monsoon broke about 10th June with fairly heavy showers, sufficient for kharíf sowing of cotton, jowári, bájri &c. July rain was seasonable and sufficient for completing kharíf sowing and for weeding. A'shlesha rain in 1st half of August, though excessive for cotton in eastern tálukas, was generally beneficial to standing crops. The subsequent break in Magha was throughout favourable for weeding and for healthy growth of crops. Rainfall in September was on the whole sufficient and seasonable for standing crops and for commencing rabi sowing. October rain was generally deficient, but rabi sowings full, as previous rain was more favourable here than in West Khándesh. Vishákha rain in early November, though slightly harmful to cotton, causing discoloration and shedding, was very beneficial to young rabi crops and for completing sowing of wheat and gram. Light showers in December were also favourable. On the whole season fairly good. Outturn of cotton estimated at 12 to 18 annas ; jowári and bájri at 10 to 16 annas, and tili 6 to 8 annas. Rabi outturn of wheat and gram estimated at 10 to 12 annas and that of linseed at 4 to 6 annas.

## Násik, 1890.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Nipha'd. | | Yeola. | | Nand-ga'on. | | Mole-gaon. | | Sata'na. | | Kalvan. | | Cha'n-dore. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·52 | 1 | .. | .. | 0·14 | 1 | .. | .. | 0·08 | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | 0·52 | 1 | .. | .. |
| Ante-Monsoon .. | 1·67 | 2 | 1·14 | 4 | 1·78 | 4 | 0·87 | 3 | 1·94 | 6 | 1·42 | 5 | 1·21 | 5 | 0·57 | 2 | 0·46 | 2 | 3·10 | 5 | 0·58 | 2 | 1·11 | 3 |
| Monsoon-Kharif .. | 13·10 | 29 | 115·98 | 69 | 8·56 | 32 | 9·09 | 23 | 9·12 | 14 | 15·69 | 16 | 7·59 | 15 | 7·78 | 19 | 12·49 | 27 | 15·09 | 35 | 11·37 | 39 | 80·83 | 60 |
| Monsoon-Rabi .. | 11·63 | 15 | 27·88 | 33 | 11·35 | 15 | 8·70 | 15 | 8·70 | 8 | 3·35 | 7 | 6·73 | 6 | 6·25 | 11 | 8·78 | 14 | 12·85 | 14 | 18·55 | 23 | 34·60 | 34 |
| Late Rains .. | 2·38 | 2 | 1·13 | 3 | 3·34 | 7 | 1·92 | 5 | 2·12 | 4 | 1·89 | 3 | 0·72 | 3 | 3·80 | 5 | 2·06 | 4 | 3·45 | 4 | 3·62 | 2 | 2·78 | 4 |
| Total .. | 29·30 | 49 | 146·13 | 109 | 25·17 | 59 | 20·58 | 46 | 21·96 | 32 | 22·35 | 31 | 16·25 | 29 | 18·40 | 37 | 23·79 | 47 | 34·49 | 58 | 34·64 | 67 | 119·32 | 101 |
| Average .. | 33·74 | .. | 130·08 | .. | 27·21 | .. | 22·68 | .. | 21·88 | .. | 28·13 | .. | 25·36 | .. | 24·11 | .. | 34·82 | .. | 29·48 | .. | 32·43 | .. | 92·36 | .. |

*General characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—Rainfall generally below average except in Chándor, Dindori, Peint and Igatpuri. Ante-monsoon showers were throughout favourable for preparing land and for sowing rice, nágli, &c., in western Dángi tálukas. General sowing rain came in 2nd week of June and kharíf sowing began, though soon retarded in many places owing to cessation of rain. July rain was sufficient and seasonable for transplantation in Dángi tálukas; elsewhere it was too light for general sowing, especially in north. Áshlesha rain in 1st fortnight of August, though excessive in Dángi tálukas, was highly seasonable in central and eastern tálukas for young crops and for further extension of bájri sowing. Magha rain was very scant and crops again suffered from want of moisture, especially in north-east. General relief came by middle of September, the rainfall being most opportune for standing crops, which were greatly improved. Hast rain in early October was throughout seasonable and sufficient for standing khárif and for rabi sowing, except in east. The late rains in November and December were also favourable for rabi crops. Season was, on the whole, fairly good. Kharif outturn was estimated at 12 to 16 ans. except in south and east, where it was 6 to 8 ans. Rabi outturn was throughout estimated at 8 to 16 ans.

## Ahmadnagar, 1890.

| Rain Periods. | 1 Nagar. | | 2 Parner. | | 3 Shrigonda | | 4 Karjat. | | 5 Jámkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Ra'huri. | | 9 Kopar-gaon. | | 10 Sangam-ner. | | 11 Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Falls | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Raiey days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. | 0·07 | .. | .. | .. | 0·35 | 1 | 0·05 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. .. | 1·78 | 2 | 0·95 | 3 | 1·67 | 2 | 1·35 | 4 | 3·18 | 2 | 3·0 | 2 | 1·43 | 4 | 2·49 | 2 | 0·49 | 2 | 1·43 | 2 | 0·60 | 1 |
| Monsoon-Kharif .. .. | 4·62 | 13 | 8·74 | 27 | 3·21 | 10 | 5·02 | 9 | 8·44 | 13 | 9·42 | 13 | 9·29 | 16 | 7·66 | 9 | 6·48 | 14 | 8·36 | 16 | 7·75 | 28 |
| Monsoon-Rabi.. .. .. | 8·82 | 14 | 6·56 | 14 | 8·81 | 11 | 6·01 | 10 | 10·76 | 19 | 7·94 | 15 | 7·91 | 13 | 5·04 | 11 | 4·44 | 8 | 7·90 | 9 | 6·25 | 13 |
| Late Rains .. .. .. | 6·31 | 7 | 3·49 | 7 | 6·52 | 5 | 8·78 | 10 | 6·04 | 8 | 3·15 | 7 | 3·00 | 7 | 3·05 | 6 | 4·64 | 6 | 2·75 | 5 | 1·91 | 4 |
| Total .. | 21·60 | 36 | 19·74 | 51 | 20·56 | 29 | 21·21 | 33 | 28·42 | 42 | 23·51 | 37 | 21·63 | 40 | 18·24 | 28 | 16·05 | 30 | 17·44 | 32 | 16·51 | 46 |
| Average .. | 25·11 | .. | 23·16 | .. | 21·52 | .. | 25·38 | .. | 28·95 | .. | 26·94 | .. | 25·42 | .. | 22·86 | .. | 18·41 | .. | 20·86 | .. | 23·00 | .. |

*General characteristics.*—(*1*) *Desh*—Godávari valley (tálukas 6 to 9) : rich alluvial plains, growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukas 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukas 1, 2, 5 and 10 lie between these valleys. Alternation of bare hill and treeless plain with occasional fertile well-wooded tracts. Rain more regular. (*2*)—*Dángs*—Half Akola has very heavy rain, half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Rainfall generally below average. Ante-monsoon showers, though generally light, were favourable for preparing land. Monsoon broke with Mrig (5th June) and the fall was sufficient for sowing of mug, udid, cotton, &c. Very little rain fell in the 2nd fortnight of June and throughout July. Sowing of bájri and other kharif crops retarded and sown crops of cotton, mug, &c., began to wither. The needed relief, however, came in Áshlesha in early August, the rainfall being very beneficial to young crops and sufficient to allow bajri sowing to be recommenced. Heavy rain of Purva in September was throughout seasonable and sufficient for standing kharif crops and for commencing sowing of rabi jowari. Hast rain in early October was favourable for full rabi sowings which were completed in subsequent breaks. Fair showers in November and December were throughout beneficial to rabi crops. On the whole season was fair. Outturn of tushár crops, *i. e.*, mug, udid, &c., was fair (8 to 10 ans.) in east; elsewhere very poor (about 2 ans.) Kharif outturn was generally fair (8 to 12 ans.) except in south where poor (1 to 4 ans.). Rabi crops were generally good, the outturn being estimated at 12 to 16 ans., except in centre and west, where it was 7 to 10 ans.

## Poona, 1890.

| Rain Periods. | Poona. | | Paud. | | Vadgáon. | | Lonávli. | | Khed. | | Groda. | | Junnar. | | Siru'r. | | Sa'svad. | | Supa. | | Bárámati. | | Inda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·26 | 2 | 0·02 | ... | 0·08 | ... | ... | ... | 0·30 | 2 | ... | ... | 0·09 | ... | ... | ... | ... | ... | ... | ... | 0·23 | 1 | 0·16 | 1 |
| Ante-Monsoon ... | 2·83 | 4 | 1·46 | 3 | 0·43 | 1 | 1·38 | 2 | 0·51 | 2 | 1·28 | 2 | 1·72 | 3 | 3·15 | 5 | 2·21 | 3 | 0·94 | 4 | 2·43 | 5 | 0·22 | ... |
| Monsoon-Kharíf ... | 15·80 | 33 | 52·43 | 60 | 27·84 | 49 | 152·67 | 68 | 8·17 | 24 | 14·66 | 38 | 12·50 | 36 | 3·88 | 9 | 7·64 | 23 | 5·15 | 10 | 5·87 | 16 | 4·72 | 9 |
| Monsoon-Rábi ... | 10·97 | 15 | 11·18 | 25 | 8·48 | 18 | 32·42 | 42 | 7·34 | 12 | 8·75 | 11 | 11·02 | 14 | 12·16 | 12 | 6·81 | 9 | 5·54 | 12 | 6·22 | 13 | 6·75 | 16 |
| Late Rains ... | 9·66 | 8 | 3·57 | 9 | 3·67 | 7 | 2·92 | 4 | 2·23 | 3 | 3·76 | 7 | 3·61 | 6 | 4·02 | 4 | 7·05 | 7 | 8·94 | 6 | 9·81 | 7 | 6·84 | 9 |
| Total ... | 39·52 | 62 | 68·66 | 97 | 40·50 | 75 | 189·39 | 116 | 18·55 | 43 | 28·45 | 58 | 28·94 | 59 | 23·21 | 30 | 23·71 | 42 | 20·57 | 32 | 24·56 | 42 | 18·69 | 35 |
| Average ... | 31·06 | ... | 60·16 | ... | 64·93 | ... | 158·04 | ... | 24·66 | ... | 30·14 | ... | 28·67 | ... | 21·73 | ... | 23·25 | ... | 20·32 | ... | 22·72 | ... | 24·78 | ... |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli, and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukás are uncertain and irregular like the adjoining tálukás of Sholápur.

*Remarks.*—Rainfall generally up to average except in Khed and Indápur. Ante-monsoon showers were generally light but useful for preparing land and for commencing early sowing of rice, nágli, &c. in Mával. Regular monsoon set in fairly in 2nd week of June, rain being sufficient for kharíf sowing of rice, nagli &c. in Mával and of bájri, mug &c. in the Desh. July rain was seasonable and sufficient for transplantation in the western tálukás of Mával but very deficient in the eastern Deshi parts, especially in Sirur and Bhimthadi. A'shlesha rain was slightly excessive in Mával where the subsequent break in Magha was favourable, elsewhere in the Desh August rain, though beneficial at first, was not sufficient for standing crops which were suffering from want of moisture in most parts. Here relief came in September, the generalheavy fall of Purva being very beneficial to standing kharíf and sufficient for commencing rabi sowing. Hast rain in early October, though favourable for standing kharíf crops and rabi sowing, was not sufficient, especially for rice in Mával. Almost no rain fell in Chitra and Svati and hence heavy Vishakha rain was most opportune, being highly beneficial to late kharíf as well as to rabi crops. Heavy rain fell again in December in south-eastern tálukás and was generally beneficial to rabi crops. Season fair on the whole. Outturn of both kharíf and rabi crops was estimated at 8 to 11 annas. Kardai was slightly damaged by late rains and the outturn was reduced to 6 annas.

## Sholápur, 1890.

| Rain Periods. | Shola'pur. | | Ba'rsi. | | Ma'dha. | | Karma'la. | | Pandharpur. | | Sángola. | | Ma'lsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·30 | 1 | 0·10 | 1 | ... | ... | 0·05 | ... | ... | ... | 0·35 | 1 | 0·23 | 1 |
| Ante-Monsoon ... | 0·70 | 2 | 2·67 | 5 | 2·38 | 4 | 2·23 | 3 | 0·99 | 4 | 1·55 | 3 | 0·27 | 2 |
| Monsoon-Kharíf ... | 11·48 | 13 | 11·38 | 19 | 6·28 | 12 | 5·74 | 10 | 6·81 | 12 | 2·40 | 7 | 6·89 | 13 |
| Monsoon-Rabi ... | 7·59 | 11 | 10·50 | 16 | 15·06 | 15 | 12·51 | 14 | 12·49 | 18 | 8·71 | 15 | 6·46 | 11 |
| Late Rains ... | 8·26 | 7 | 12·25 | 8 | 5·30 | 7 | 6·67 | 9 | 2·80 | 6 | 4·89 | 7 | 5·88 | 10 |
| Total ... | 28·33 | 34 | 36·90 | 49 | 29·02 | 38 | 27·20 | 36 | 23·09 | 40 | 17·90 | 33 | 19·73 | 37 |
| Average ... | 33·33 | ... | 32·35 | ... | 27·89 | ... | 26·32 | ... | 27·65 | ... | 22·99 | ... | 21·07 | ... |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Rainfall below average in southern and above average in northern tálukás. Monsoon broke early in June with fair showers throughout the district, useful for preparing land and for commencing kharíf sowings in places. The subsequent rain, however, was generally deficient and kharíf sowings only partially done except at Bársi, where the rainfall was seasonable and sufficient. Fair fall of A'shlesha in early August was favourable for standing kharíf and for preparing land for rabi sowing. Purva and Uttara rain in September was throughout seasonable and sufficient for sowing rabi jowari. October rain though light was on the whole sufficient for completing sowing of jowári, wheat, gram, &c. The general heavy rain of Vishakha in the first week of November was most seasonable and highly beneficial to rabi crops which were flourishing everywhere. Fairly heavy showers again fell in December, which were generally favourable to rabi crops, but excessive in Bársi where rabi outturn was slightly reduced. On the whole kharif season was generally poor, the outturn being estimated at 2 to 4 annas. Rabi season was throughout excellent, and, though kardai slightly suffered from blight in places, jowári was full average crop.

## Sátára, 1890.

| Rain Periods. | Sa'ta'ra. | | Koregaon. | | Wa'i. | | Khandala. | | Medha. | | Malcolm-peth. | | Pa'tan. | | Kara'd. | | Peth. | | Shira'là. | | Dahivadi. | | Vaduj. | | Vita. | | Ta'sgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·52 | 3 | 2·10 | 2 | 0·74 | 3 | 0·48 | 1 | 1·17 | 1 | 0·29 | 1 | 0·58 | 3 | 1·65 | 2 | 0·59 | 1 | 0·20 | 1 | 0·31 | 1 | 0·10 | 1 | 0·20 | 1 | 0·80 | 3 |
| Ante-Monsoon ... | 0·35 | 1 | 2·81 | 5 | 2·12 | 5 | 1·74 | 3 | 0·95 | 2 | 4·57 | 6 | 0·82 | 2 | 0·45 | 3 | 1·21 | 4 | 0·69 | 2 | 1·51 | 5 | 1·51 | 5 | 1·23 | 6 | 1·84 | 6 |
| Monsoon-Kharíf ... | 28·44 | 58 | 14·12 | 41 | 17·14 | 38 | 7·86 | 15 | 56·45 | 59 | 271·53 | 71 | 61·11 | 63 | 18·20 | 36 | 15·95 | 29 | 30·76 | 45 | 5·19 | 13 | 6·83 | 17 | 8·42 | 32 | 9·07 | 25 |
| Monsoon-Rabi ... | 4·58 | 13 | 3·0 | 9 | 5·52 | 10 | 4·98 | 12 | 5·52 | 12 | 42·31 | 41 | 6·30 | 11 | 4·91 | 14 | 5·94 | 9 | 7·63 | 8 | 5·89 | 16 | 7·96 | 10 | 7·05 | 13 | 5·10 | 12 |
| Late Rains ... ... | 3·56 | 5 | 4·28 | 4 | 3·80 | 4 | 3·37 | 7 | 2·70 | 5 | 3·97 | 6 | 4·09 | 6 | 5·45 | 7 | 2·54 | 5 | 2·70 | 3 | 4·91 | 7 | 5·61 | 7 | 4·92 | 10 | 3·21 | 5 |
| Total ... | 37·45 | 80 | 26·31 | 61 | 29·32 | 60 | 18·43 | 38 | 66·79 | 79 | 322·67 | 125 | 72·90 | 85 | 30·66 | 62 | 26·23 | 48 | 41·98 | 59 | 17·81 | 42 | 22·01 | 40 | 21·82 | 62 | 20·02 | 51 |
| Average ... | 40·84 | ... | 27·68 | ... | 32·47 | ... | 21·45 | ... | 70·49 | ... | 268·08 | ... | 67·85 | ... | 31·64 | ... | 29·43 | ... | 37·88 | ... | 20·51 | ... | 21·85 | ... | 24·71 | ... | 28·49 | ... |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—Rainfall generally below or up to average. Ante-monsoon showers generally light but favourable for preparing land. Monsoon broke in 2nd week of June, with sufficient rain for commencing kharíf sowing throughout the district. July rain was sufficient and seasonable for transplantation of rice, nágli, &c., in west and for completing kharíf sowing in south and centre, but it was very deficient in north-east tálukás (Mán and Khatáv), where sowing retarded and sown crops began to suffer. The heavy and continuous rain of A'shlesha in first-half of August was slightly harmful to standing crops in western and central tálukás where the subsequent break in Magha was very favourable for weeding and for growth of crops. In south-eastern tálukás, however, A'shlesha rain was deficient and hence the break in Magha was injurious to crops. Partial relief came in Purva, while the fall of Uttara and Hast, though not sufficiently heavy, was throughout seasonable and most beneficial to standing crops as well as for rábi sowing. Vishákha rain in early November was fairly heavy and generally beneficial to rabi crops. The unusually heavy rain in December, though slightly harmful to jowári, &c., in places, was on the whole beneficial to rabi. Season was on the whole good. Kharíf outturn was estimated at 10 to 14 annas in west and centre and at 4 to 10 annas in south-east. Rábi outturn ranged from 8 to 12 annas in south-east and 12 to 16 annas elsewhere.

## Belgaum, 1890.

| Rain Periods. | Belgaum. | | Chandgad. | | Kha'na'-pur. | | Sampgaon. | | Saundatti. | | Murgod. | | Goka'k. | | Chikodi. | | Hukeri. | | Athni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·58 | 1 | 0·40 | 2 | 0·98 | 2 | 0·99 | 4 | 0·14 | ... | 0·52 | 2 | 0·11 | ... | 1·92 | 3 | 2·31 | 3 | 0·03 | ... |
| Ante-Moon ... ... | 2·62 | 6 | 4·58 | 8 | 2·59 | 7 | 2·48 | 8 | 3·19 | 6 | 2·86 | 8 | 1·78 | 4 | 6·66 | 7 | 1·65 | 5 | 5·28 | 7 |
| Monsoon-Kharif ... .. | 30·69 | 53 | 94·81 | 68 | 52·30 | 61 | 10·46 | 30 | 6·91 | 15 | 9·21 | 21 | 7·72 | 23 | 12·21 | 26 | 13·89 | 26 | 3·36 | 14 |
| Monsoon-Rabi ... ... | 10·20 | 14 | 8·01 | 25 | 8·60 | 23 | 9·09 | 13 | 3·60 | 9 | 5·80 | 11 | 4·98 | 10 | 2·72 | 8 | 4·86 | 9 | 4·71 | 13 |
| Late Rains ... ... | 5·76 | 9 | 9·54 | 10 | 5·10 | 10 | 5·84 | 9 | 4·05 | 5 | 6·13 | 7 | 4·45 | 8 | 5·31 | 4 | 7·35 | 5 | 2·61 | 4 |
| Total ... | 49·85 | 83 | 117·34 | 113 | 69·57 | 103 | 28·86 | 64 | 17·89 | 35 | 24·52 | 49 | 19·04 | 45 | 28·82 | 48 | 30·06 | 48 | 15·99 | 38 |
| Average ... | 46·80 | ... | 95·98 | ... | 64·68 | ... | 28·14 | ... | 24·47 | ... | 24·40 | ... | 23·79 | ... | 27·65 | ... | 21·60 | ... | 24·42 | ... |

*General characteristics.*—Near the Sahyádris, the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukás show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—Rainfall generally up to average, slightly above in south-west and below in north-east tálukás. Ante-monsoon showers were throughout favourable for preparing the land. Rainfall in June was sufficient for sowing rice, nágli, &c., in south-west; elsewhere rain scanty and kháríf sowings retarded. July rain, though excessive for nágli, was sufficient and favourable for rice transplantation and for sowing sprouted rice in south-west; elsewhere good rain came in Pushya in the third week of July and was generally sufficient for kharíf sowing except Athni which received very little rain. A'shlesha rain in August was excessive in south-west but subsequent break in Magha was very valuable for weeding and for healthy growth of crops. Elsewhere August rain was deficient and crops suffered from want of moisture. Heavy rain was throughout absent in September and rice began to suffer and cotton sowing retarded. Hast rain in early October, though not heavy, was very beneficial to withering rice and for rabi sowing. Rainfall in latter part of October was again deficient, especially in Saundatti and Athni, where crops were withering. General heavy rain of Vishákha in early November was throughout seasonable and highly beneficial to rabi crops. Season fair on the whole. Kharíf outturn was estimated at 10 to 16 annas in south-west; elsewhere 4 to 10 annas. Rabi crops were fairly good in west and south-west (10 to 16) annas, elsewhere middling (6 to 10 annas).

## Bijápur, 1890.

| Rain Periods. | Bija'pur. | | Indi. | | Sindgi. | | Ba'gevá'di. | | Muddebihal. | | Ba'galkot. | | Bilgi. | | Ba'da'mi. | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. | 0·11 | .. | 0·80 | 2 | 0·42 | 1 | 0·40 | 1 | .. | .. | 0·04 | ... | 0·07 | ... | ... | ... | 0·04 | ... |
| Ante-Monsoon .. .. | 3·42 | 5 | 1·05 | 5 | 3·79 | 4 | 2·75 | 8 | 2·60 | 7 | 5·95 | 8 | 2·32 | 6 | 3·23 | 5 | 2·75 | 8 |
| Monsoon-Kharif .. .. | 7·20 | 10 | 11·41 | 16 | 9·75 | 13 | 2·88 | 8 | 11·47 | 15 | 3·02 | 11 | 5·46 | 11 | 4·03 | 11 | 3·87 | 7 |
| Monsoon-Rabi .. .. | 10·89 | 17 | 11·60 | 16 | 10·09 | 15 | 10·23 | 23 | 13·01 | 16 | 9·07 | 14 | 9·37 | 15 | 15·74 | 19 | 5·74 | 10 |
| Late Rains .. .. .. | 6·94 | 6 | 4·83 | 7 | 6·75 | 6 | 4·59 | 7 | 8·96 | 8 | 5·90 | 6 | 8·09 | 8 | 6·10 | 4 | 7·66 | 10 |
| Total .. | 28·56 | 38 | 29·69 | 46 | 30·80 | 39 | 20·85 | 47 | 36·04 | 46 | 23·98 | 39 | 25·31 | 40 | 29·10 | 39 | 20·06 | 35 |
| Average .. | 26·79 | .. | 25·73 | | 25·71 | .. | 25·02 | .. | 23·46 | .. | 24·07 | ... | 22·93 | ... | 25·51 | ... | 25·82 | ... |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukas of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Rainfall generally above the average except Bágevádi and Hungund. Ante-monsoon showers were throughout favourable for preparing land. Monsoon set in with Mrig in fairly heavy showers all over, sufficient for commencing kharíf sowing, especially in north. Sowings, however, retarded or only partially continued as the rainfall in July was generally scanty. Áshlesha and Magha rain in August was good at Indi and Sindgi in north and at Bádámi in south where standing crops were in good condition ; elsewhere sown crops were badly withering from want of moisture. General relief came in 2nd week of September with Purva, the rainfall being very beneficial to standing kharíf as also for rabi sowing of cotton, rála, jowári, &c. Hast rain in early October was also sufficient and seasonable for standing kharíf crops, and for further sowing of rabi jowári, wheat and gram. Vishákha rain in November, though rather heavy in places, was highly beneficial to standing crops throughout. Slight damage was caused in November by locusts while passing through Indi and Sindgi Tálukas. Season fair on the whole. Kharíf outturn estimated at 6 to 13 annas and rabi outturn at 8 to 14 annas. Cotton having suffered from blight gave poor outturn.

## Dhárwár, 1890.

| Rain Periods. | Dha'rwa'r. | | Mugud. | | Hubli. | | Kalghatghi. | | Banka'pur. | | Ha'ngal. | | Kod. | | Ra'nebennur. | | Karajgi. | | Gadag. | | Mundargi. | | Navalgund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains . | 0·62 | 2 | 0·30 | 1 | 0·06 | ... | 1·05 | 2 | ... | ... | 0·41 | 2 | 1·45 | 2 | 0·05 | ... | 0·64 | 2 | ... | ... | 0·36 | 1 | ... | ... | 0·40 | 1 | ... | ... |
| Ante-Monsoon .. | 4·00 | 9 | 3·83 | 10 | 2·32 | 7 | 4·79 | 9 | 2·82 | 6 | 3·59 | 10 | 6·19 | 10 | 5·68 | 10 | 4·15 | 7 | 4·25 | 5 | 3·38 | 4 | 2·08 | 5 | 1·18 | 3 | 3·91 | 7 |
| Monsoon-Kharíf .. | 11·31 | 31 | 15·53 | 40 | 8·07 | 18 | 16·85 | 43 | 9·45 | 34 | 22·43 | 47 | 9·61 | 30 | 5·51 | 15 | 7·65 | 23 | 6·35 | 14 | 4·44 | 13 | 3·95 | 10 | 5·09 | 11 | 5·22 | 14 |
| Monsoon-Rabi .. | 5·54 | 12 | 5·20 | 10 | 9·78 | 14 | 7·37 | 19 | 3·38 | 10 | 6·20 | 14 | 4·18 | 7 | 6·98 | 14 | 5·81 | 11 | 9·00 | 17 | 10·34 | 18 | 10·33 | 14 | 16·38 | 16 | 14·31 | 16 |
| Late Rains .. | 7·07 | 11 | 6·81 | 9 | 8·56 | 10 | 10·60 | 8 | 6·24 | 8 | 7·40 | 9 | 13·68 | 10 | 16·48 | 12 | 11·26 | 7 | 4·78 | 6 | 7·74 | 10 | 3·50 | 6 | 1·85 | 6 | 4·13 | 5 |
| Total .. | 28·54 | 65 | 31·67 | 70 | 28·79 | 49 | 40·66 | 81 | 21·89 | 58 | 40·03 | 82 | 35·11 | 59 | 34·70 | 51 | 29·51 | 50 | 24·38 | 42 | 26·26 | 46 | 19·86 | 35 | 25·40 | 37 | 27·57 | 42 |
| Average .. | 32·95 | ... | 34·34 | ... | 27·03 | ... | 30·14 | ... | 28·29 | ... | 37·34 | ... | 27·70 | ... | 23·82 | ... | 27·21 | ... | 25·98 | ... | 17·51 | ... | 25·36 | ... | 23·56 | ... | 25·77 | ... |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur Tálukas are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says : 'Good rain won't give a big crop, nor will bad rain bring famine.' This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Rainfall above average in south and west, elsewhere below or up to average. Ante-monsoon showers were useful for preparing land for cultivation. Monsoon broke about 8th June with light showers, sufficient to begin rice sowings in west ; elsewhere kharíf sowing retarded till 20th July when fair rain of Pushya sufficient for jowári sowing came all over the district. Áshlesha rain in 1st half of August was beneficial but insufficient, while Magha and Purva rain was very scanty throughout the district except in north-east and crops began to suffer everywhere. Relief came with Hast at end of September, the fall being highly beneficial to withering rice and other crops and for completing cotton sowing. Svváti and Vishákha rain in November was unnecessarily heavy in south, but seasonable and very beneficial to rabi crops. In north however, rabi crops suffered from want of moisture. Season was fair on the whole. The outturn of both kharíf and rabi crops was estimated at 8 to 12 annas. Cotton being affected by blight generally suffered in outturn.

## Kánara, 1890.

| Rain Periods. | Kárwár. | | Ankolá. | | Kumta. | | Hona'var. | | Bhátkal. | | Haliyál. | | Supa. | | Yella'pur. | | Mundgod. | | Sirsi. | | Sidda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | .. | 0·03 | ... | ... | ... | ... | ... | 0·96 | 1 | 2·05 | 3 | 0·05 | ... | 0·48 | 1 | 0·61 | 1 | ... | ... |
| Ante-Monsoon ... | 15·18 | 13 | 16·89 | 12 | 21·22 | 13 | 17·70 | 11 | 13·99 | 14 | 5·50 | 12 | 5·49 | 11 | 4·51 | 9 | 1·60 | 7 | 4·81 | 12 | 3·02 | 7 |
| Monsoon-Kharif ... | 95·11 | 63 | 109·93 | 66 | 133·84 | 65 | 122·05 | 68 | 104·91 | 68 | 26·44 | 47 | 64·75 | 68 | 72·61 | 65 | 22·40 | 49 | 71·81 | 61 | 79·49 | 63 |
| Monsoon-Rabi ... ... | 8·35 | 15 | 11·09 | 19 | 11·39 | 23 | 11·23 | 23 | 7·63 | 21 | 10·58 | 15 | 7·57 | 17 | 12·45 | 25 | 8·28 | 20 | 9·27 | 20 | 5·98 | 19 |
| Late Rains ... ... | 2·40 | 7 | 4·52 | 10 | 4·84 | 7 | 3·07 | 7 | 5·28 | 11 | 7·04 | 13 | 8·67 | 9 | 10·39 | 12 | 6·89 | 10 | 9·94 | 11 | 8·46 | 11 |
| Total ... | 121·04 | 98 | 142·43 | 107 | 171·32 | 108 | 154·05 | 109 | 131·81 | 114 | 50·52 | 88 | 88·53 | 108 | 100·01 | 111 | 39·65 | 87 | 96·44 | 105 | 96·95 | 100 |
| Average ... | 116·62 | ... | 126·46 | ... | 133·11 | ... | 123·38 | ... | 140·91 | ... | 44·37 | ... | 89·18 | ... | 91·56 | ... | 41·25 | ... | 91·94 | ... | 98·93 | ... |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The lowland or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—Rainfall generally up to average and slightly above average on coast. South-west monsoon set in early on 29th May on the coast with sufficient and seasonable rain for sowing. In upland tálukas sowing rain came a little later. Kharif sowings completed in June throughout the district. Rain in first half of July was insufficient but heavy rain fell throughout in Pushya and A'shlesha, and, though slightly excessive in places, was on the whole seasonable and sufficient for transplantation which was completed by middle of August. Rainfall in September was generally deficient and rice crops, especially in hilly lands in coast tálukas, suffered in outturn. Hasta rain in early October was very beneficial to rice and other crops in upland tálukas. Late rains in Sváti and Vishákha, though moderately heavy and useful for sowing second crops, were generally unseasonable and injurious to ripened as well as to reaped rice and to betelnut. On the whole season was fairly good. Outturn of rice and other crops was generally estimated at 13 annas.

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## Ratnágiri, 1890.

| Rain Periods. | Ratna'-giri. | | Vengurla. | | Ma'lva'n. | | Devgad. | | Ra'ja'pur. | | Sanga-meshvar. | | Chiplun. | | Guhagar. | | Khed | | Da'poli. | | Mandan-gad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | 0·22 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon... .. | 6·14 | 5 | 11·29 | 5 | 14·34 | 7 | 7·28 | 5 | 6·77 | 6 | 3·10 | 5 | 1·60 | 4 | 2·57 | 4 | 2·26 | 5 | 2·15 | 3 | 2·24 | 3 |
| Monsoon-Kharif ... | 104·15 | 65 | 97·77 | 60 | 88·61 | 63 | 72·88 | 64 | 144·84 | 70 | 169·51 | 70 | 152·31 | 67 | 92·74 | 67 | 151·03 | 69 | 142·70 | 67 | 157·26 | 71 |
| Monsoon-Rabi ... ... | 8·50 | 22 | 13·60 | 25 | 8·76 | 20 | 6·78 | 19 | 12·25 | 27 | 22·83 | 38 | 21·81 | 34 | 9·76 | 23 | 30·35 | 38 | 21·98 | 32 | 22·43 | 37 |
| Late Rains ... ... | 1·37 | 4 | 1·14 | 4 | 1·94 | 3 | 1·31 | 1 | 1·76 | 4 | 3·08 | 5 | 2·74 | 5 | 1·44 | 3 | 2·76 | 3 | 1·00 | 2 | 0·92 | 3 |
| Total ... | 120·16 | 96 | 124·02 | 95 | 113·65 | 93 | 88·25 | 89 | 165·62 | 107 | 198·52 | 118 | 178·46 | 110 | 106·51 | 97 | 186·40 | 115 | 167·83 | 104 | 182·85 | 114 |
| Average ... | 100·73 | ... | 101·48 | ... | 89·57 | ... | 87·50 | ... | 127·91 | ... | 145·57 | ... | 146·04 | ... | 100·84 | ... | 130·52 | ... | 132·64 | ... | 150·79 | ... |

*General characteristics.*—The district is formed by a narrow belt of lowland; though hilly, and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Rainfall generally above average. Regular monsoon broke early about 31st May and rain fell almost daily till the end of August; the fall of Pushya and A'shlesha was excessive, especially in northern tálukas, causing slight damage to young crops and delaying transplantation. Magha rain in 2nd fortnight of August was generally light and very beneficial to growing crops. In September and October rain fell generally in light showers, but was on the whole seasonable and quite up to requirements. Chitra rain in October, however, was injuriously heavy in Sangameshvar and Chiplun. The late rain of Vishákha in early November, though slightly injurious to ripened as well as to reaped crops, was favourable for sowing second crops. Season was good on the whole. Outturn of early crops was estimated at 14 to 16 annas, and that of late crops and of harik at 13 to 14 annas.

## Kolába, 1890.

| Rain Periods. | A'LIBA'G. | | PANVEL. | | URAN. | | PEN. | | ROHA. | | MA'NGAON. | | MAHÁD. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·03 | ... | 0·04 | ... | ... | ... | 0·15 | 1 | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon... ... ... | 2·62 | 3 | 1·76 | 2 | 0·87 | 3 | 1·71 | 2 | 5·85 | 2 | 1·32 | 2 | 0·95 | 3 |
| Monsoon-Kharíf ... ... | 71·01 | 64 | 110·58 | 66 | 76·58 | 61 | 105·46 | 67 | 109·35 | 68 | 135·65 | 66 | 143·94 | 67 |
| Monsoon-Rabi ... ... ... | 20·96 | 21 | 20·73 | 29 | 17·10 | 24 | 23·77 | 37 | 18·85 | 31 | 32·32 | 40 | 20·91 | 33 |
| Late Rains ... ... ... | 1·03 | 2 | 1·06 | 2 | 1·0 | 1 | 2·40 | 1 | 2·97 | 2 | 1·35 | 4 | 1·91 | 4 |
| Total ... | 95·65 | 90 | 134·17 | 99 | 95·55 | 89 | 133·49 | 108 | 135·2 | 103 | 170·64 | 112 | 167·71 | 107 |
| Average ... | 84·79 | ... | 110·50 | ... | 95·48 | ... | 114·04 | .. | 122·27 | ... | 127·59 | ... | 130·58 | ... |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heaviest in parts towards the Sahyádris.

*Remarks.*—Rainfall generally above average. Regular monsoon set in with Mrig (5th June), the rainfall in June being seasonable and sufficient throughout the district for sowing and transplantation. Very heavy rain fell in Pushya at end of July and though excessive for weeding, was not injurious to any of the crops. August rain was seasonable and sufficient to all crops. Purva and Uttara rain in September, though excessive for rice in lowlying lands, was on the whole beneficial to standing crops. Chitra rain in October was excessive in Mángaon, while late rain of Vishákha was injurious to reaped and ripe crops in Pen and Roha. It was, however, favourable to rabi crops. Season was good on the whole. Outturn of rice, nágli, and vari was estimated at 10—14 annas. Rabi outturn was estimated at 14 annas.

## Thána, 1890.

| Rain Periods. | THA'NA. | | KALYA'N. | | KARJAT. | | MÁTHERÁN. | | KHÁLÁPUR. | | MURBÁD. | | SHÁHÁPUR. | | MOKHÁDA. | | BHIWNDI. | | BASSEIN. | | VÁDA. | | MÁHIM. | | DÁHÁNU. | | UMBARGAON. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·15 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 0·77 | 2 | 0·92 | 2 | 0·44 | 1 | 0·50 | 1 | 1·20 | 3 | 0·72 | 2 | 0·39 | 1 | 1·31 | 2 | 1·08 | 1 | 0·81 | 1 | 0·95 | 2 | 0·92 | 1 | 0·58 | 2 | 0·80 | 2 |
| Monsoon-Kharif ... | 82·16 | 64 | 99·29 | 61 | 122·80 | 68 | 239·65 | 69 | 117·09 | 65 | 94·48 | 65 | 95·89 | 68 | 72·80 | 65 | 94·12 | 66 | 67·96 | 54 | 67·14 | 61 | 36·72 | 54 | 49·75 | 61 | 54·16 | 50 |
| Monsoon-Rabi ... | 14·40 | 29 | 17·83 | 27 | 21·63 | 28 | 49·99 | 48 | 26·69 | 35 | 25·71 | 35 | 25·04 | 34 | 22·67 | 36 | 15·80 | 27 | 15·99 | 21 | 18·04 | 34 | 8·42 | 20 | 8·15 | 17 | 17·70 | 18 |
| Late Rains ... ... | 0·67 | 2 | 1·56 | 4 | 2·13 | 4 | 2·35 | 3 | 3·37 | 5 | 1·10 | 2 | 0·70 | 2 | 2·27 | 2 | 0·82 | 2 | 0·19 | 1 | 0·43 | 1 | 1·05 | 2 | 0·44 | 1 | 0·05 | ... |
| Total ... | 98·00 | 97 | 119·60 | 94 | 147·00 | 101 | 292·49 | 121 | 148·35 | 108 | 122·01 | 104 | 122·02 | 105 | 99·20 | 106 | 111·82 | 96 | 84·95 | 77 | 86·56 | 98 | 47·12 | 77 | 58·92 | 81 | 72·71 | 70 |
| Average ... | 99·12 | ... | 100·73 | ... | 126·91 | ... | 209·71 | ... | 122·09 | ... | 96·15 | ... | 111·34 | ... | 100·92 | ... | 101·79 | ... | 78·85 | ... | 95·96 | ... | 62·67 | ... | 71·39 | ... | 64·83 | ... |

*General characteristics.*—Inland, the district is well watered and well wooded. Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Rainfall generally above average, and a little below in north. Monsoon broke in light showers with Mrig (5th June) and rice and varkas sowing commenced everywhere. Heavy rain fell in latter half of June by which sowing delayed and sown seed washed away in places. Rainfall in July and August was throughout seasonable and sufficient for ploughing and transplantation which was completed by middle of August. September rain was very favourable for standing crops. Hast rain in October, though generally light, was injurious to early crops in some places, while Vishákha rain in early November slightly damaged cut crops lying in fields. On the whole season was very good. Kharif outturn was throughout estimated at 12 to 20 annas. The outturn of salt rice was unusually good. Rabi outturn was estimated at 10 to 18 annas.

## Surat, 1890.

| Rain Periods. | Surat. | | Olpa'd. | | Ra'nder. | | Ma'ndvi. | | Ba'rdoli. | | Va'lod. | | Jala'lpor. | | Chikhli. | | Balsa'r. | | Pa'rdi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 1·04 | 1 | 0·10 | 1 | 0·64 | 2 | 0·10 | 1 | 0·32 | 1 | 2·19 | 2 | 0·90 | 1 | 0·73 | 2 | 0·25 | 1 | 0·30 | 1 |
| Monsoon-Kharif ... ... | 46·97 | 39 | 28·67 | 30 | 43·22 | 42 | 43·47 | 49 | 59·30 | 48 | 44·17 | 51 | 38·73 | 46 | 51·12 | 55 | 52·89 | 52 | 57·51 | 57 |
| Monsoon-Rabi ... ... | 8·30 | 13 | 5·64 | 11 | 7·84 | 15 | 11·36 | 15 | 9·32 | 17 | 10·57 | 15 | 8·50 | 11 | 20·67 | 23 | 18·71 | 24 | 26·79 | 23 |
| Late Rains ... ... | 0·04 | ... | ... | ... | 0·26 | 1 | 0·08 | ... | ... | ... | 0·34 | 1 | 1·24 | 2 | 0·03 | ... | 0·29 | 2 | 0·24 | 1 |
| Total ... | 56·35 | 53 | 34·41 | 42 | 51·96 | 60 | 55·01 | 65 | 68·94 | 66 | 57·27 | 69 | 49·37 | 60 | 72·55 | 80 | 72·14 | 79 | 84·84 | 82 |
| Average ... | 44·06 | ... | 35·52 | ... | 42·95 | ... | 65·27 | ... | 53·82 | ... | 61·31 | ... | 58·96 | ... | 77·63 | ... | 74·43 | ... | 71·49 | ... |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east *Dángs* with heavy rainfall but light soil. As a rule rain lighter on the coast than inland.

*Remarks.*—Rainfall generally below average; and slightly above average in Chorási and Bárdoli in north and Párdi in south. Fair preparatory showers of Rohini in early June. Monsoon broke about 12th June with fair showers, sufficient for sowing rice, cotton, bájri, &c. Abnormally heavy rain fell between 18—21st June, either washing away newly sown seed or causing it to rot in many places. Rain fell almost daily in July, and though seasonable and sufficient for rice transplantation, was excessive for sowing cotton, juár, &c. August rain fell generally in light showers and with intervening breaks was very favourable for completing sowing of cotton, juar, &c., as also for weeding. Heavy rain of Uttara in 2nd week of September, coming after a break, was very beneficial to standing crops and for preparing land for rabi sowing. Hast rain was fair in south, where useful for rabi sowing; elsewhere very scant. Light showers of Vishákha in early November, though insufficient, were beneficial to rabi crops. Season fair on the whole. Outturn of rice was generally good and estimated at 16 annas. Cotton and jowári suffered owing to excessive rain in the beginning and want of moisture from late rains, the outturn being 9 annas. Rabi crops fair in south, elsewhere below average.

---

## Broach, 1890.

| Rain Periods. | Broach. | | Ankleshvar. | | Hánsot. | | Vágra. | | Ámod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 0·68 | 1 | 1·51 | 1 | 0·33 | 1 | 0·74 | 2 | 0·49 | 1 | 0·57 | 1 |
| Monsoon-Kharif ... ... | 20·79 | 27 | 25·64 | 30 | 18·45 | 23 | 13·73 | 28 | 19·35 | 23 | 20·13 | 24 |
| Monsoon-Rabi ... ... | 5·51 | 9 | 5·85 | 10 | 4·97 | 9 | 5·39 | 8 | 4·80 | 12 | 6·47 | 11 |
| Late Rains ... ... ... | ... | ... | ... | ... | ... | ... | 0·02 | ... | ... | ... | 0·05 | ... |
| Total ... | 26·98 | 37 | 33·00 | 41 | 23·75 | 33 | 19·79 | 38 | 24·64 | 36 | 27·22 | 36 |
| Average ... | 44·21 | ... | 41·41 | ... | 34·24 | ... | 30·60 | ... | 41·75 | ... | 39·46 | ... |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being as a rule more plentiful in the Broach táluka. The rainfall is supplemented by heavy dews from October to December.

*Remarks.*—Rainfall throughout below average. Fair preparatory rain of Rohini in early June. Monsoon broke about 12th June. General heavy rain came in Árdra in latter half of June, being seasonable and sufficient for kharíf sowing everywhere. July rain, though deficient in quantity, fell at seasonable intervals and was on the whole favourable for completing kharíf sowing and for weeding. Fairly heavy rain fell in A'shlesha about middle of August and was throughout beneficial to standing crops of cotton, juár, &c., though insufficient for rice, especially in Ankleshvar and Hánsot. General heavy rain came again, after a long break, by the middle of September and was very beneficial to standing crops and for rabi sowing of juár, wheat, láng, &c. Very little rain fell subsequently and rabi crops suffered from want of moisture. Season was on the whole fair. Kharíf outturn was estimated at 9 to 14 annas. Cotton suffered from severe cold and want of sufficient moisture from dews and the outturn was poor (10 annas), compared with last year's bumper crops.

## Kaira, 1890.

| Rain Periods. | Kaira. | | Mehmadabad. | | Mátar. | | Nadia'd. | | Kapadvanj. | | Tha'sra. | | A'nand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·23 | 1 | ... | ... | ... | ... |
| Ante-Monsoon ... ... ... | 0·17 | 1 | 1·07 | 1 | 0·33 | 1 | 0·26 | 1 | 0·55 | 2 | 0·86 | 1 | 0·35 | 2 | 0·96 | 2 |
| Monsoon-Kharif ... ... ... | 22·10 | 36 | 20·87 | 29 | 22·93 | 30 | 27·53 | 36 | 30·71 | 32 | 21·87 | 28 | 20·62 | 29 | 26·14 | 28 |
| Monsoon-Rabi ... ... ... | 4·90 | 9 | 6·66 | 7 | 3·85 | 8 | 4·17 | 8 | 4·75 | 5 | 2·23 | 6 | 3·47 | 7 | 2·84 | 7 |
| Late Rains ... ... ... | 0·07 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 27·24 | 46 | 28·60 | 37 | 27·11 | 39 | 31·96 | 45 | 36·01 | 39 | 25·24 | 36 | 24·44 | 38 | 29·94 | 37 |
| Average ... | 37·13 | ... | 34·24 | ... | 37·93 | ... | 37·27 | ... | 34·57 | .. | 36·66 | ... | 38·44 | ... | 37·89 | ... |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land; the centre, a tract of most fertile soil yielding the choicest crops; and westward a bare though well cultivated tract of rice land.

*Remarks.*—Rainfall generally below average except at Kapadvanj. Light to fair showers of Rohini in early June were useful for preparing land. Monsoon broke about 11th June with fair fall all over the district sufficient to commence rice and kodra sowing. Kharif sowing continued though heavy rain was absent till close of June. July opened with general heavy rain sufficient for completing kharif sowing and for commencing rice transplantation. Pushya rain, in latter half of July though favourable for other kharif crops, was insufficient for rice, and many seedling beds, as the Collector remarks, became useless. Many cultivators in despair sowed bájri and other cereals or deliberately decided to allow their land a fallow, thinking that no rice could come to perfection. The result was that comparatively only a small area was planted with rice. General heavy rain came about 11th August in A'shlesha and was very favourable for completing rice transplantation. Very little rain fell in September and the late rains were altogether absent, consequently rabi area was smaller than usual. Season was on the whole fair. Kharif outturn was fairly good; bájri, guár, &c., 14 annas, kodra and cotton 13 annas, juár and bávto 12 annas, tobacco and rice 9 annas. Of rabi, wheat fair, 11 annas, but gram poor, 4 annas. The yield of ráyan, mango and moho tree was plentiful.

## Panch Maháls, 1890.

| Rain Periods. | Godhra. | | Kálol. | | Hálol. | | Dohad. | | Jha'lod. | | Ja'mbughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains... ... | 0·14 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 0·12 | ... | 1·04 | 1 | 0·10 | 1 | 0·55 | 1 | 0·20 | 1 | 0·33 | 1 |
| Monsoon-Kharif ... | 30·13 | 34 | 23·80 | 36 | 33·00 | 35 | 18·73 | 32 | 23·90 | 33 | 38·16 | 39 |
| Monsoon-Rabi ... | 6·72 | 11 | 2·94 | 9 | 3·45 | 9 | 5·57 | 10 | 2·96 | 6 | 10·90 | 13 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | 0·59 | 1 | .. | ... | 0·98 | 1 |
| Total ... | 37·11 | 46 | 27·78 | 46 | 36·55 | 45 | 25·44 | 44 | 27·06 | 40 | 50·37 | 54 |
| Average ... | 43·24 | ... | 40·20 | ... | 47·97 | ... | 32·56 | ... | 32·65 | ... | 50·39 | ... |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Rainfall much below average. Monsoon broke about 11th June with moderately heavy showers, sufficient to commence kharif sowings of rice, kodra, maize, &c. General heavy rain fell in A'rdra and Punarvasu until middle of July and was sufficient for completing kharif sowing. Pushya rain in latter half of July was deficient for rice transplantation. Heavy rain in A'shlesha in 2nd week of August, though seasonable and sufficient for rice transplantation, was excessive for bájri and pulses, especially in Jambughoda. Partial break in Magha and Purva in August was generally favourable to all crops except rice which needed more rain. Fair showers of Uttara in 2nd week of September were throughout beneficial. Very little rain fell in Hast and the late rains were altogether absent; consequently kharif crops, especially late sown rice, suffered in outturn and rabi area was short. Season on the whole fair. The outturn of kharif crops, maize, bájri, &c., was estimated at 10 to 14 annas; rice was poor, 3 to 8 annas. Rabi outturn of gram and wheat was estimated at 4 to 8 annas. Fruit trees, *e. g.*, moho, mango, &c., gave a bumper yield.

## Ahmadabad, 1899.

| Rain Periods. | Ahmedabad. | | Parántij. | | Modása. | | Sa'nand. | | Viramgám. | | Dholka. | | Dhandhuka. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·85 | 1 |
| Ante-Monsoon ... | 0·65 | 1 | 0·44 | 2 | 0·60 | 2 | 0·20 | 1 | 1·72 | 2 | 0·07 | ... | 0·74 | 2 | 0·57 | 2 |
| Monsoon-Kharif ... | 17·26 | 35 | 19·51 | 32 | 27·06 | 36 | 18·48 | 34 | 20·05 | 27 | 22·02 | 28 | 8·49 | 16 | 16·12 | 22 |
| Monsoon-Rabi ... | 4·84 | 7 | 2·81 | 10 | 1·97 | 6 | 3·10 | 7 | 4·02 | 8 | 8·74 | 8 | 2·97 | 7 | 3·98 | 10 |
| Late Rains ... ... | ... | ... | 0·17 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·12 | ... |
| Total ... | 22·75 | 43 | 22·93 | 45 | 29·63 | 44 | 21·78 | 42 | 25·79 | 37 | 30·83 | 36 | 12·20 | 25 | 21·64 | 35 |
| Average ... | 29·92 | ... | 30·08 | ... | 37·32 | ... | 31·09 | ... | 28·22 | ... | 36·39 | ... | 27·92 | ... | 27·35 | ... |

*General characteristics.*—Except in the hilly parts of Modása, where the supply is sometimes considerable, the rainfall throughout the districts is generally very light.

*Remarks.*—Rain throughout below average. Monsoon broke about 11th June in light showers useful for preparing land and for commencing kharif sowing in north. General sowing rain came in Árdra after 20th June. In July rain fell at seasonable intervals and was sufficient for completing kharif sowings of juar, bájri, &c., but not enough for rice transplantation. Heavy rain came in Áshlesha in 2nd week of August and was favourable for completing rice transplantation. Fair showers of Uttara in middle of September were beneficial to all standing crops, but closing showers, especially desirable for rice, were absent. Consequently rice suffered in outturn. Rabi area was comparatively small and rabi crops suffered from want of moisture, especially in Dhandhuka, which is a rabi táluka and where year's rainfall was most deficient. Rabi crops also suffered in some parts from frost and blight. Season on the whole fair except in Dhandhuka. Outturn of bájri and jowári estimated at 10 to 14 annas, and of rice at 6 to 12 annas. Cotton crop variously estimated at from 3 to 12 annas and wheat at 6 to 12 annas.

# APPENDIX A.

## *Dairy Experiments.*

These experiments have been conducted with two objects in view :—

(1) to introduce improved European dairy machinery and processes, and

(2) to study systematically the feeding and management of milch cattle and the value of various breeds for dairy purposes.

The use of separators has already considerably extended. The Bombay Agent of the Dairy Supply Company has sold 24 cream separators, half in Bombay and the rest to mofussil purchasers. One of these has established a separator at Nadiád (Gujarát). He separates about 700 lbs. of milk daily and sends the cream in locked cans to Bombay, where it is made into butter next morning. He sells his butter at 12 annas per lb., paying Rs. 2-8-0 per 100 lbs. of milk. At this rate, he appears to make a profit of about Rs. 15 per day. The separated milk he has found unsaleable hitherto at Nadiád. It is, however, now made into curd and sent to Bombay. In Bombay and Poona separated milk finds a ready sale, especially among the poorer classes. Generally the machines are working in Bombay and Poona at good profit.

A Dairy Class was opened by this Department in Bombay for a month, when about 20 persons were instructed, among whom were two men deputed by the Mahárája of Ulwár and one by the Nadiád Agricultural Association. A man deputed by the Kolhápur Darbár was trained at the Poona Dairy.

In June last, Mr. Keventer, the dairy expert, held exhibitions at Belgaum and Dhárwár. At Belgaum the milk was poor, yielding one pound of butter to 17 lbs. of milk. A competitive trial with Gavlis was arranged, but the results were inconclusive as the milk supplied was undoubtedly tampered with. The separator turned out one pound of butter for 20 lbs. of milk while the Gavlis extracted an equal quantity from half the quantity of milk. At Dhárwár good results were shown, but little interest was manifested in the demonstration. At the request of the local administrations Mr. Keventer visited Kolhápur and Bangalore, exhibiting and working the dairy machinery. His services have since August last been transferred to the Agricultural Department of the North-Western Provinces.

This Department undertook with the permission of Government the supply of milk and butter to the Poona Military hospitals and prisons during 1891-92 and has thus been able to extend its experience of the milking breeds of cattle. The contract has proved a financial success. During the seven months ending October last, the Commissariat Department has saved about 250 rupees per mensem besides securing a pure supply for the soldiers. At the same time, it has been found practicable to produce milk at a reasonable profit at 8 seers per rupee on the Government Farm or is somewhat less than the local market rate, but the profits of the farm herd amount to Rs. 485. The Medical and Commissariat officers have recorded a very favourable opinion as to quality. The separated milk is considered sufficiently nutritious for ordinary purposes and is useful for fever patients.

Experiments have been made to prove the varying percentages of butter fat in the milk of individual animals from the time they calve until they go dry. The effect of feeding with varying qualities of concentrated food has also been noted. Soxhlet's apparatus has been used successfully in these experiments. The ordinary lactometer fails to test buffalo's milk correctly, because of its richness, and Soxhlet's apparatus fails so far from a similar cause, but this is corrected by reducing the milk to a known standard.

The difference in butter fat between the first and last drawn milk in the case of buffalo milk has also been worked out.

| | |
|---|---|
| Percentage of butter fat in first seer drawn ... ... | 4·0 |
| Do. do. last do. ... ... | 10·1 |
| Average per cent. of fat in the whole milk of this buffalo... | 6·98 |

These experiments have been conducted by Mr. Mollison, who has embodied the results in a memorandum on "Points on butter-making in India." This memorandum together with other papers has been circulated by the Government of India and published in the *Indian Agriculturist*.

*Cheese-making.*—Mr. Mollison has written a full report on the results of the cheese-making experiments conducted in Poona last hot weather, which is here summarized.

In spite of the great heat results were encouraging and point to the conclusion that although in districts like Poona, where pasturage is deficient, milk dear, and the temperature not sufficiently cool and uniform, the industry is not likely to take root, in Northern India it will probably succeed.

The cheeses were made in part from buffalo milk containing 6 per cent. fat, and in part from "reduced" milk containing half that quantity. (Reduced milk is half buffalo and half separated milk.) The chief difficulty was experienced in ripening, during which process an even temperature not easily attainable in Poona, of 65° to 75° Fahrenheit, should be maintained, with moist air.

Cheeses were successfully made with Withania rennet, which offers no disadvantages over the animal rennet that could not be overcome by care and experience.

The best cheeses made with both rennets were made with whole buffalo milk. They were of good flavour, good texture, and had good keeping qualities.

The best cheese made out of the series was made from milk one-half of which had been ripened by being left overnight in a temperature under 70 degrees. No sour whey was added in this case.

Mr. Keventer the Swedish expert, who superintended the experiments, gained valuable experience of the conditions of Indian cheese-making. He is now carrying them on under more favourable circumstances at Aligarh, and the apparatus used here has been taken over by the Government of the North-Western Provinces.

# APPENDIX B.

*Exports of Indian wheat from Bombay and Karáchi to all Ports beyond the Presidency from 1880—1891.*

| Year. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *Exports from Bombay.* | | | | | | | |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| 1880... ... | 2,927 | 1,626 | 3,407 | 4,985 | 17,110 | 19,407 | 15,055 | 7,832 | 4,193 | 6,527 | 8,652 | 22,991 | 114,712 |
| 1881... ... | 21,768 | 19,275 | 20,000 | 32,481 | 42,428 | 52,236 | 47,369 | 28,172 | 35,132 | 48,835 | 76,714 | 48,559 | 472,969 |
| 1882... ... | 85,674 | 40,239 | 30,557 | 30,390 | 67,886 | 37,190 | 19,386 | 5,396 | 13,797 | 22,317 | 34,159 | 32,703 | 419,694 |
| 1883... ... | 31,019 | 25,403 | 29,516 | 37,503 | 76,205 | 82,881 | 55,921 | 32,425 | 36,265 | 18,466 | 29,319 | 34,508 | 489,431 |
| 1884... ... | 15,285 | 15,933 | 14,997 | 15,230 | 44,831 | 54,894 | 65,437 | 45,546 | 30,974 | 19,045 | 28,038 | 27,806 | 378,016 |
| 1885... ... | 41,846 | 32,366 | 45,824 | 38,933 | 56,871 | 66,602 | 33,379 | 38,004 | 48,975 | 52,808 | 59,598 | 53,977 | 569,183 |
| 1886... ... | 31,424 | 24,484 | 28,402 | 71,581 | 124,232 | 56,341 | 38,715 | 52,896 | 55,461 | 51,166 | 37,584 | 53,433 | 625,719 |
| 1887... ... | 44,235 | 21,379 | 26,595 | 75,325 | 101,018 | 113,946 | 20,172 | 12,657 | 14,778 | 14,106 | 17,383 | 11,129 | 472,723 |
| 1888... ... | 12,090 | 14,419 | 23,729 | 67,400 | 118,586 | 66,165 | 32,841 | 32,472 | 29,514 | 46,241 | 28,058 | 23,022 | 494,537 |
| 1889... ... | 47,591 | 18,567 | 26,949 | 30,649 | 41,838 | 15,934 | 20,382 | 23,129 | 17,796 | 21,390 | 17,716 | 31,569 | 313,510 |
| 1890... ... | 22,795 | 7,653 | 9,191 | 36,907 | 49,386 | 26,745 | 25,562 | 15,362 | 4,045 | 12,312 | 37,824 | 36,387 | 284,169 |
| 1891... ... | 36,141 | 12,681 | 19,882 | 70,161 | 156,136 | 150,086 | 35,001 | 25,552 | ... | ... | ... | ... | ... |
| | | | | | | *Exports from Karáchi.* | | | | | | | |
| 1880... ... | 1,487 | 4,677 | 2,792 | 1,160 | 1,819 | 893 | 808 | 217 | 172 | 351 | 955 | 647 | 15,978 |
| 1881... ... | 1,163 | 409 | 182 | 820 | 1,647 | 1,055 | 3,439 | 2,300 | 7,809 | 12,207 | 18,575 | 20,280 | 69,686 |
| 1882... ... | 16,794 | 5,390 | 2,296 | 3,105 | 5,276 | 7,833 | 7,516 | 8,282 | 10,012 | 11,023 | 23,571 | 16,910 | 118,008 |
| 1883... ... | 8,161 | 19,158 | 15,767 | 2,356 | 4,830 | 21,289 | 39,198 | 33,013 | 11,946 | 11,815 | 17,264 | 14,551 | 217,348 |
| 1884... ... | 8,832 | 14,438 | 21,110 | 8,533 | 6,752 | 9,683 | 14,001 | 23,733 | 18,343 | 21,326 | 27,331 | 18,869 | 192,951 |
| 1885... ... | 12,023 | 21,745 | 31,204 | 19,648 | 12,511 | 13,612 | 29,768 | 35,476 | 28,716 | 40,741 | 30,376 | 46,116 | 321,936 |
| 1886... ... | 27,926 | 13,619 | 13,542 | 7,975 | 12,326 | 20,531 | 24,299 | 11,331 | 17,563 | 18,781 | 4,487 | 6,581 | 178,961 |
| 1887... ... | 4,420 | 2,090 | 304 | 20 | 1,539 | 7,621 | 7,698 | 2,098 | 181 | 3,081 | 3,609 | 2,960 | 35,621 |
| 1888... ... | 1,325 | 1,794 | 1,111 | 461 | 4,995 | 15,313 | 15,921 | 19,826 | 24,291 | 17,836 | 25,765 | 24,842 | 153,480 |
| 1889... ... | 29,514 | 10,074 | 11,365 | 19,271 | 11,186 | 24,137 | 46,366 | 32,209 | 28,263 | 34,647 | 52,626 | 49,068 | 348,726 |
| 1890... ... | 27,607 | 18,174 | 11,409 | 7,656 | 12,012 | 18,746 | 54,553 | 46,919 | 24,471 | 41,861 | 32,312 | 35,572 | 331,292 |
| 1891... ... | 26,964 | 16,530 | 20,763 | 6,946 | 2,457 | 41,998 | 107,434 | 94,249 | ... | ... | ... | ... | ... |

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# DIRECTOR, LAND RECORDS AND AGRICULTURE,

## BOMBAY PRESIDENCY,

FOR THE YEAR 1891-92.

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1892.
[Price—9 Annas.]

BOMBAY BRANCH
OF THE
Royal Asiatic Society.
CLASS

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NO. 3490 OF 1892.

FROM

E. L. CAPPEL, ESQUIRE, I. C. S.,
Director, Land Records and Agriculture,
Bombay;

To

T. D. MACKENZIE, ESQUIRE, I. C. S.,
Chief Secretary to Government,
Revenue Department,
Bombay.

*Poona, 7th December 1892.*

SIR,

I have the honour to submit the **ninth** Annual Report of the Department of Land Records and Agriculture, for the year ending 31st October 1892.

2. During the year under report my movements were as follows:—In November 1891 I inspected the Bombay Rail-borne Trade Statistical Office (then under this Department), visited Bijápur to ascertain, in consultation with the Collector, the agricultural prospects of the district, and conferred with the Collector of Kolába at Alibág regarding the accommodation of the Survey Records of the district. In December and January I undertook a tour in the affected parts of the Southern Marátha Country, visiting Bijápur, Hubli, Dhárwár, Belgaum, Miraj and Athni. In this tour also I inspected the head-quarter offices, and discussed with the Divisional Inspector, S. D., matters in connection with the working of the Circle Inspector staff. In February I visited the Indápur táluka, which was threatened with scarcity. In March I went to Bombay to arrange for the transfer of the Rail-borne Trade Statistical Office. In May I travelled in Gujarát, visiting Nadiád and Ahmadabad, where I inspected the veterinary dispensaries. At Nadiád I inspected also the farm of the Agricultural Society in company with Mr. Mollison, and reviewed the annual report of the Committee. In June a tour was taken with a view to arrange for the housing of Survey Records in the Central Division, which extended over the three northern districts of the Deccan, Khándesh, Násik and Ahmadnagar. In this month I paid an inspection visit to the Bhadgaon Farm. In July I went to Bombay to make over charge of the Bombay Trade Office, and visited Sholápur to confer with the Collector as to the housing of the Survey Records. In August I made a second inspection tour in Bijápur, Dhárwár and Belgaum, and visited Sátára to arrange with the Collector for the Survey Record accommodation. In September I visited Khed (Poona district) to select land for potato experiments. Government stallions and veterinary dispensaries were inspected at all stations visited.

3. Mr. Mollison, the Superintendent of Farms, from time to time visited the Bhadgaon and Nadiád Farms, and gave unintermittent attention to the Poona Farm. He visited Ahmadnagar to attend the horse and agricultural show and gave lectures for the prescribed courses at the College of Science. The potato experiments at Khed are being conducted under his immediate supervision, and he has also given much time and care to the improvement of the old Botanical Gardens at Ganesh Khind. Mr. Mollison has regularly checked and supervised all farm accounts and experimental statistics; has placed the dairy and dairy herd on a thoroughly sound footing; and has studied and scrutinized all crop experiments reported. He has also made considerable progress in the preparation of a text book for the use of the agricultural classes at the College, which will be submitted to Government when complete.

## I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

4. The agricultural staff has this year been introduced into all the districts of the Central Division, the organization being the same as that in the

Southern Division, described in last year's report (paragraphs 5—12). Circle Inspectors' peons have been provided from the Mámlatdárs' establishments without additional cost.

Circle Inspectors, C. D.

The distribution of the Circle Inspectors as fixed in consultation with the Commissioner is shown below :—

| District. | Former number of Bhág Kárkúns. | Number of Circle Inspectors. | | | Number of old Bhág Kárkúns now left for Mámlatdárs' Office Staff. |
|---|---|---|---|---|---|
| | | Bhág Kárkúns utilized as Circle Inspectors. | Additional hands. | Total number. | |
| Khándesh ... ... | 62 | 32 | 16 | 48 | 30 |
| Násik ... ... ... | 34 | 17 | 19 | 36 | 17 |
| Ahmadnagar ... ... | 28 | 15 | 19 | 34 | 13 |
| Poona ... ... ... | 27 | 11 | 13 | 24 | 16 |
| Sholápur ... ... | 18 | 7 | 13 | 20 | 11 |
| Sátára ... ... ... | 35 | 16 | 17 | 33 | 19 |
| Total ... | 204 | 98 | 97 | 195 | 106 |

The large reduction of the Deccan Survey setting free a number of subordinates, ninety per cent. of the additional hands and all the members of the head-quarter staff were recruited from these. The Circle Inspectors began work from about the 15th July, except in Khándesh where they joined in the middle of August. They were employed to the end of August in compilation at táluka head-quarters, in checking village census forms, and on other duties of a like nature, together with measuring work, and, in part of the Sholápur District, with the preparation of Revision Survey papers.

* Head-quarter Assistant, Record-keeper, Record Kárkún, Daftarband.

The head-quarter staff* joined by the end of July, and were placed in charge of the Survey Records, classifying them into A and B Divisions for separate housing, as security against loss by fire.

District Inspectors.

The District Inspectors joined at about the same time. They were set to work, compiling the Huzúr Agricultural Returns as prescribed, and necessarily had much to do in making themselves acquainted with their new functions, besides supervising the head-quarter establishments and carrying out other parts of their ordinary duty.

Divisional Inspector.

The Divisional Inspector, C. D., (Mr. F. B. Young), joined on the 16th May, and in the interval between that date and the introduction of the staff was occupied in the study of records and standing orders and in visiting other districts on duty concerning the organization. He has since been specially employed in supervising the classification of the records, and has visited all the districts of the division in connection with the accommodation to be provided for them.

Survey records.

The Khándesh and Násik records were located at Málegaon; those of the other districts at Poona; and the head-quarter staff worked accordingly at these places. The classification was finished in the case of Sátára by the 31st October, and the records were removed to the Collector's charge. The transfer of the rest will take place as soon as the sorting is complete.

Permanent quarters for the accommodation of the records and head-quarter staff in the various districts are being built, or otherwise arranged for. In the meantime, temporary accommodation will be made use of where necessary.

5. In the Southern Division, except in Kolába, the agricultural staff was organized and equipped in full last year and no changes, except of detail, have been made.

The Divisional Inspector, S. D., (Mr. Lushington), was on tour in his charge throughout the fair season, travelling for the first 6 weeks in the distressed tálukas of Bijápur, Dhárwár and Belgaum. He visited 43 villages, collecting information as to the condition of the ryots, crops and cattle, and covered in this enquiry a large extent of country. He was throughout in communication with the Collectors, and forwarded useful notes of his enquiries, carrying on at the same time the check and inspection duties of his office. Settlement work in Kánara and the organization of the staff in Ratnágiri occupied him specially for about a month in each of these districts. Belgaum was again visited in May and Bijápur in June. In August, a special crop inspection was made in the Gadag Táluka of Dhárwár.

6. In both divisions, district survey classes were formed under the District Inspectors in September-October for the untrained Inspectors, and an examination was held in the subjects noted last year, *viz.*, the Circle Inspector's Rules, the Revenue Manual, Rules as to boundary-marks, and measurement.

Inspection.

7. To secure uniformity, forms have been prescribed (1) for report by Circle Inspectors of work done and (2) for report by the District Inspector of his test of this work. As full information of this kind was not previously received from Belgaum and Kánara, a detailed comparison with last year's work can be made only for the Dhárwár and Bijápur districts. In Ratnágiri, the conditions are peculiar owing to the absence of village officers for the most part, and the Circle Inspector's duties lie in the direction of original work rather than in inspection. The operations in this district will be noticed further on.

8. *Crop, Waste and Boundary-mark Inspection.*—This is the Circle Inspector's test of Village Forms 2—4, formerly tested by the General Duty Kárkúns. Circle Inspectors examine the boundary marks of those numbers only of which they make crop or waste inspection.

Under the Circle Inspectors' Rules, the daily minimum was fixed at 12 survey numbers. This minimum was in practice found excessive, especially in the plain tálukas of the Karnátak, and has been experimentally reduced to 10 survey numbers, or an area of 120 acres, in Bijápur, Dhárwár, and Belgaum. In Kánara the minimum has been temporarily lowered to 8 survey numbers; the numbers in this district, though small, being much sub-divided and lying at considerable distances one from another. The following table shows the average amount of inspection done in each district :—

| District. | Average by each Circle Inspector. | | | Average area of an occupied number. | Average area of an inspected number. |
|---|---|---|---|---|---|
| | No. of days of actual work. | No. of villages inspected. | No. of Survey numbers (occupied and waste) inspected per day. | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | Acres. | Acres. |
| Dhárwár ... ... | 60·1 | 37·8 | 9·4 | 11·1 | 8·4 |
| Bijápur ... ... | 54·2 | 33·8 | 9·2 | 16·2 | 14·5 |
| Belgaum ... ... | 45·6 | 28·7 | 9·0 | 10·5 | 6·3 |
| Kánara... ... ... | 74·1 | 39·8 | 9·6 | 2·4 | 2·3 |

The inspection period is about 80 days; the deficiency of actual work as compared with this in the first 3 districts is explained by the unavoidable employment of the men on famine duty for the number of days noted in the margin.

| | |
|---|---|
| Dhárwár ... ... | 13·1 |
| Bijápur ... ... | 26·1 |
| Belgaum ... ... | 24·9 |

Columns 5 and 6 are added to show how far there is a tendency to select only the smaller numbers for inspection. This is conspicuous in Dhárwár and Belgaum only at present, and will probably be checked altogether by instructions since issued.

*Inspection Percentage Statement.*

| District. | Year. | Villages inspected per cent. | Crop Inspection: Occupied Lands. Percentage inspected. | | Waste Inspection. Unoccupied Lands. Percentage inspected. | |
|---|---|---|---|---|---|---|
| | | | On Survey Numbers. | On Area. | On Survey Numbers. | On Area. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Dhárwár ... ... | 1891-92 ... | 75 | 10·01 | 7·63 | 24·20 | 16·85 |
| | 1890-91 ... | 86 | 7·42 | 5·19 | 28·30 | ... |
| Bijápur ... ... | 1891-92 ... | 69 | 7·51 | 6·91 | 31·58 | 22·26 |
| | 1890-91 ... | 76 | 8·41 | 7·46 | 35·60 | ... |
| Belgaum ... ... | 1891-92 ... | 64 | 7·05 | 4·22 | 24·23 | 14·85 |
| Kánara ... ... | 1891-92 ... | 65 | 14·15 | 13·60 | 19·30 | 10·72 |

*Column 3.*—The annual inspection of every village in which Form 3 is kept as the rule, but this year the number unvisited is large. This is, of course, mainly accounted for by the withdrawal of the Circle Inspectors for special famine work, as already noted. In Kánara and Belgaum, however, the two newly equipped districts, absentee Kulkarnis were also a marked hindrance. Sickness, as usual, also prevented the inspection of some villages. But in ordinary years it is essential that every village should receive some inspection, and to prevent interference by accidental causes of the latter kind it has been decided to allow a Circle Inspector, who after the lapse of half the inspection period finds himself unable to complete his full test of each within time, to reduce the minimum of test, with the previous sanction of the Mámlatdár. As neither famine nor census operations need be expected to recur for some time, it may be anticipated that the percentage of uninspected villages will in future be small.

The crop inspection of occupied numbers (column 4) is fair throughout and compares favourably with that of last year, due allowance being made for the obstacles mentioned above. The district percentage shown is not a test of the efficiency of the staff, as the Circle Inspector's work is measured by the numbers and area tested irrespective of their proportion to the district total; but, in estimating the sufficiency of the check exercised, 10 per cent. may ordinarily be taken as a standard.

*Waste inspection* (column 6) is satisfactory, except in Kánara, the standard laid down being 25 per cent. In Dhárwár 52 encroachments, 10 in Bijápur, 35 in Belgaum and 273 in Kánara were discovered, of which only 7, 1, 5 and 184 respectively were noticed by village officers.

*Village crop registration* shows considerable improvement in Dhárwár and Bijápur. In Kánara it appears particularly satisfactory, owing most likely to the circumstance that crop mixtures are not frequent, and also not improbably to want of experience by the inspecting staff. Except in Kánara the Kulkarni's boundary-mark inspection is very inefficient, though in the two districts where the Agricultural Inspectors have been longest at work, it has improved to some extent.

| District. | Year. | Entries found correct (per cent.) |
|---|---|---|
| Dhárwár ... ... ... ... | 1891-92 ... ... ... ... | 52 |
| | 1890-91 ... ... ... ... | 42 |
| Bijápur ... ... ... ... | 1891-92 ... ... ... ... | 52 |
| | 1890-91 ... ... ... ... | 30 |
| Belgaum ... ... ... ... | 1891-92 ... ... ... ... | 56 |
| Kánara ... ... ... ... | 1891-92 ... ... ... ... | 78 |

| District. | Year. | Boundary-mark Inspection. Shown in village Form III as in disrepair. | Omitted. | Wrongly shown as in repair. |
|---|---|---|---|---|
| Dhárwár ... ... ... ... | 1891-92 ... ... ... | 15 | 62 | 23 |
| | 1890-91 ... ... ... | 12 | 49 | 39 |
| Bijápur ... ... ... ... | 1891-92 ... ... ... | 27 | 40 | 33 |
| | 1890-91 ... ... ... | 17 | 26 | 57 |
| Belgaum ... ... ... ... | 1891-92 ... ... ... | 12 | 53 | 35 |
| Kánara ... ... ... ... | 1891-92 ... ... ... | 46 | 32 | 22 |

9. The superior check exercised by the District Inspectors is exhibited in the following statement:—

| District. | Year. | Number of Circles. | | Number of villages in which test taken. | Crop Inspection. | | Waste Inspection. | | Boundary-mark Inspection. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total. | Visited. | | Percentage on Circle Inspector's work. | Quality of work found. | Percentage on Circle Inspector's work. | Quality of work found. | Percentage on Circle Inspector's work. | Quality of work found. |
| Dhárwár... ... | 1891-92 ... | 28 | 10 | 24 | 0·66 | 80 | 0·63 | 85 | 0·61 | 91 |
| | 1890-91 ... | 37 | 33 | 67 | 3·50 | 90 | 3·90 | 99 | 3·50 | 98 |
| Bijápur ... ... | 1891-92 ... | 24 | 15 | 37 | 2·00 | 77 | 1·30 | 94 | 1·70 | 99 |
| | 1890-91 ... | 38 | 38 | 87 | 5·10 | 78 | 4·60 | 99 | 5·30 | 91 |
| Belgaum... ... | 1891-92 ... | 24 | 7 | 19 | 0·52 | 90 | 1·00 | 91 | 0·60 | 97 |
| Kánara ... ... | 1891-92 ... | 23 | 17 | 28 | 0·80 | 71 | 0·40 | 90 | 0·04 | 68 |

The duty of testing Circle Inspectors' regular work primarily rests on Mámlatdárs and Sub-divisional Officers, the District Inspectors being responsible for check of measurements and classification. They are required to take a test of other regular work sufficient to satisfy themselves that Circle Inspectors understand their duties, and that standing orders are followed. Owing to the abolition of the Assistant District Inspectors the tests thus taken have necessarily fallen off considerably from those of the preceding year. Nevertheless, I am not satisfied with the amount of work done in this direction, and the Belgaum District Inspector (Mr. Limaye) has been specially warned against future neglect. The District Inspector of Kánara was allowed to stay too long at head-quarters. District Inspectors need not be called upon to visit many villages in each circle, but each should be visited at least once, and the test in the village or villages selected should be thorough. Instructions to this effect have been issued for future guidance.

The falling off in quality of Circle Inspectors' work in Bijápur and Dhárwár is explained by the introduction of new and untrained hands. On the whole, they have performed their duties well, especially when it is considered that more than half the number are new to the work.

The Collectors' remarks on the Circle and District Inspectors are shown below:—

*Dhárwár.*—"On the whole, the work performed by the Agricultural staff appears to be satisfactory, as will be seen from the unanimous opinion of the Mámlatdárs and the Divisional Officers. The supervision of the District Inspector over the work of the Agricultural staff has been efficient, and his work was generally satisfactory. The apparent increase of work done during the year is partly due to the careful attention paid to this matter by the officers of the Agricultural and Revenue Departments."

*Bijápur.*—Mr. Davidson remarks: "I consider that Mr. Náik has worked well during the year, and I am quite satisfied with his work. Of course, of the technical part, the Collector is not in a position to judge. * * * * In a year like this, I was too busy to personally make any tests of the Circle Inspectors' work. The general opinion of my Assistants seems to be they work moderately well, but that there is a want of control over the Inspectors, owing to the number of officers who have more or less connection with them."

Mr. Rand thinks that "the Circle Inspectors have not got through as much outdoor inspection work as they might have done, and the District Inspector might with advantage have given more time to testing the field-work of his subordinates."

*Kánara.*—"The Assistant Collectors and several Mámlatdárs tested the work of the Circle Inspectors, and from the reports received, the work done has been as good as could be expected in the first year from men mostly untrained beforehand."

*Ahmadnagar.*—"Considering the lateness of its commencement, the work done has been satisfactory. The survey men are comparatively useless at present as regards compilation work, and have everything to learn."

*Sholápur.*—"The staff has not been working for a long time and, therefore, it is difficult to express an opinion about its work, but the Collector is sure that it will prove undoubtedly useful in the compilation and checking of agricultural statistics and in promptly measuring lands in dispute."

10. As regards the supervision and test of Circle Inspectors' work by the Sub-divisional Officers and Mámlatdárs, statements have been received from the Collectors of Dhárwár and Kánara, with details as below :—

| District. | Number of villages visited. | Number of Survey Numbers in which | | Annual census tested (number of entries). | Birth and death register tested (number of entries). |
|---|---|---|---|---|---|
| | | Boundary-mark record checked. | Crop record checked. | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| *Dhárwár.* | | | | | |
| First Assistant Collector .. ... | 74 | 369 | ... | ... | ... |
| Second Assistant Collector ... ... | 21 | 3% | 3% | 3% | 3% |
| Assistant Collector ... .. ... | 13 | 67 | 48 | ... | ... |
| District Deputy Collector ... ... | 76 | 302 | 302 | 361 | ... |
| *Kánara.* | | | | | |
| First Assistant Collector ... ... | 9 | 95 | 95 | ... | ... |
| Second Assistant Collector ... ... | 7 | 102 | 104 | ... | ... |

The omissions under columns 4, 5 and 6 are noticeable, though they are partly due to failure to keep a record of tests made. The District Deputy Collector of Dhárwár has exercised a due amount of supervision. Ten Mámlatdárs in Dhárwár and five in Kánara tested crop and boundary-mark records and, in a few cases, census registers, but a majority of them have not given full details. No record of tests was kept by the Belgaum officers, and the Bijápur return has not yet been forwarded. The Collector, however, remarks that Mr. Hervey took tests of the work of Circle Inspectors in his charge, and Messrs. Rand and Cursetji also made extensive tests, but Mr. Deshpánde's other duties prevented his undertaking any of this work. Undoubtedly, the famine interfered greatly with these duties.

A form for the regular and uniform report of tests of the Circle Inspectors' work has now been sanctioned, and this will tend, by impressing on Sub-divisional Officers and Mámlatdárs the necessity for their methodical execution, to make this check more of a reality in the future.

The supervision exercised by the Divisional Inspector, S. D., is shown below:—

| District. | Number of Talukas. | | Total number of Circles. | Daftars examined. | Crop Waste and Boundary-Mark Inspection. | | Complete Boundary-Mark Inspection. | | Measuring. | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total. | Visited. | | | In how many Circles. | Survey Numbers tested. | In how many Circles. | Marks tested. | In how many Circles. | Survey Numbers tested. | |
| Dhárwár ... ... | 11 | 8 | 28 | 16 | 7 | 37 | 2 | 293 | 2 | 2 | |
| Bijápur ... ... | 8 | 1 | 24 | 3 | 1 | 2 | ... | ... | ... | ... | |
| Belgaum ... ... | 7 | 4 | 24 | 10 | 2 | 16 | 3 | 627 | 3 | 4 | |
| Kánara ... ... | 8 | 2 | 23 | 6 | 3 | 21 | ... | ... | ... | ... | |
| Ratnágiri ... ... | 9 | 4 | 27 | 8 | *2 | 4 | ... | ... | ... | ... | * Also instructed 3 Inspectors in field-work. |
| Total ... | 43 | 19 | 126 | 43 | 15 | 80 | 5 | 920 | 5 | 6 | |

The Divisional Inspector visited all the districts in his charge, and out of 126 Circle Inspectors 55 of whom were partly on famine duty, he visited 43 Circle Inspectors, in 19 tálukas, and examined their book-work. He also tested the field-work of 15 Circle Inspectors. Mr. Lushington rightly paid special attention to the Daftar examination, as the staff is a new one, and this shows unmistakeably whether an Inspector understands his business. He was also occupied with

special famine enquiries and with the Haliyál settlement work. He thoroughly examined the survey records and the head-quarter and District Inspectors' offices in all the districts, and the field work of three District Inspectors. Owing to the distress in the Bijápur District there was little field work to test there, and in Ratnágiri also there was no field work available for test owing to the staff being employed on special duties.

11. *Check Census of Population and Live-stock.*—This is now done in the month of July in one of the divisions of each circle. As in former years, commencement of the work was delayed by the detention of Circle Inspectors at táluka head-quarters for compilation, especially in Belgaum; in Bijápur the employment of the men in connection with takávi advances hindered it in two tálukas. In Kánara heavy rain and the deputation of Circle Inspectors on other duties delayed this check. The tests extended, however, over 90 per cent. of the villages selected in three of the districts, and over 66 in Belgaum: in Dhárwár and Bijápur 422 and 366 villages were tested as against 398 and 317 last year. Of the entries checked, 81 per cent. were found correct, ranging from 77 per cent. in Bijápur to 87 per cent. in Kánara. The District Inspectors all took tests of this work in accordance with orders issued last year, but their test is still insufficient in Belgaum and Kánara.

12. *Check of Village Sanitary Forms.*—The Circle Inspectors checked these forms according to rule, reporting 132 omissions of births and 35 of deaths in Dhárwár, 90 and 15 in Bijápur, 37 and 14 in Belgaum, and 67 and 31 in Kánara. Cause of death was wrongly entered in 17 cases in Dhárwár, 7 in Bijápur, 5 in Belgaum and 2 in Kánara. Omissions to enter it at all were less common, but in Dhárwár and Bijápur they were found to be especially numerous in municipal towns and large villages. Errors thus discovered are communicated through the Mámlatdár to the Deputy Sanitary Commissioner. The Sanitary Commissioner has favoured me with the reports of his Deputies as regards the value of the test. They are of opinion that it is good and of considerable value, but the Deputy Sanitary Commisioner, Southern Registration District, adds that it would be enhanced were registration made compulsory.

13. *Complete Boundary-mark Inspection.*—This inspection was carried on in 52 villages in Belgaum, 50 in Dhárwár, 15 in Bijápur and 61 in Kánara. The totals now inspected under the new system in Bijápur and Dhárwár are 545 and 468. Progress has been much retarded by the detailing of the men on famine duty. Re-inspection omitted last year in Dhárwár has been brought up to date.

The number of boundary marks found out of repair was 14 per cent. in Kánara, 34 per cent. in Bijápur and 29 per cent. in Dhárwár and Belgaum. The need for systematic inspection as now carried out is strongly shown by these figures, and it is satisfactory that for the most part, on re-inspection, the marks are found repaired by the ryots without further trouble. In Dhárwár 96 per cent. were so repaired; in the newly equipped districts the results are not so good, but it may be expected that they will improve as the meaning of the orders and their force are better understood by occupants.

**Statement showing measurement and classing work done by Circle Inspectors.**

| District. | Arrears on 31st July 1891. | New cases. | Disposed of. | Arrears on 31st July 1892. |
|---|---|---|---|---|
| Dhárwár ... ... ... ... | 537 | 1,168 | 1,103 | 602 |
| Bijápur ... ... ... ... | 457 | 920 | 1,066 | 311 |
| Belgaum ... ... ... ... | 48 | 561 | 408 | 201 |
| Kánara ... ... ... ... | 135 | 907 | 757 | 285 |

14. Arrears are still high, but this was to be expected under the circumstances of the year, and with a number of recruits untrained in measuring. They should be greatly reduced next year. There is a tendency in some districts also to impose miscellaneous duties not prescribed by the rules upon Circle Inspectors, and Collectors have been addressed with a view to the correction of this practice.

| | Rs. |
|---|---|
| Dhárwár .. .. .. .. .. | 245 |
| Bijápur .. .. .. .. .. | 58 |
| Belgaum .. .. .. .. .. | 155 |
| Kánara .. .. .. .. .. | 455 |
| Total .. | 913 |

The amount brought to credit on account of Circle Inspectors' pay and allowances while engaged on measurement and classing is shown in the margin.

15. The statement of head-quarter office work given below shows that good work has been done.

| District. | Number of cases received necessitating corrections in survey record. | Number of Akarbands. | | Number of maps and field books corrected. | Number of extracts from field books sent to Circle Inspectors. | Number of extracts from survey books supplied to revenue officers and petitioners. | Number of maps supplied to village officers. |
|---|---|---|---|---|---|---|---|
| | | Corrected. | Remaining for correction on 1st August. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Dhárwár ... ... | 35 | 130 | ... | 308 | 805 | 143 | 145 |
| Bijápur ... ... | 136 | 131 | 5 | 786 | 80 | 81 | 139 |
| Belgaum ... ... | 68 | 78 | 28 | 204 | 357 | 150 | 70 |
| Kánara ... ... | 47 | 273 | 1,311 | 66 | 324 | 103 | 478 |

The large number of extracts supplied to Circle Inspectors in Dhárwár (column 6) proves that the staff worked energetically during the second boundary-mark inspection time, at which these extracts are mostly called for. The small amount of this re-inspection in Bijápur gave opportunity for the *akarband* correction (column 4) to be brought up to date in that district, where last year the arrears were 53. Besides the work shown, in Belgaum the whole of the record classification was carried out. In Kánara also good progress has been made in this direction, and the amount of *akarband* correction is good. The heavy outstandings are due to the enormous number of alterations accompanying the forest settlement operations, and proposals have been made for obtaining the co-operation of the Forest Settlement Officer's staff in this work.

| District. | Extracts from survey papers supplied to applicants. | Extracts supplied to Circle Inspectors. | Village maps. | Total. |
|---|---|---|---|---|
| | Rs. | Rs. | Rs. | Rs. |
| Dhárwár .. .. .. .. | 70 | 13 | 23 | 106 |
| Bijápur .. .. .. .. | 20 | ... | 40 | 60 |
| Belgaum .. .. .. .. | 76 | 22 | 30 | 128 |
| Kánara .. .. .. .. | 33 | .... | 23 | 56 |

The table in the margin shows fees credited for maps and extracts supplied to or on behalf of applicants.

16. *The Agricultural Staff in the Ratnágiri District.*—The number of Circle Inspectors originally sanctioned for this district was 27. These have now been, as a temporary measure, reduced to 18, a reduction somewhere having been necessitated in order to bring the cost of the staff in the Southern Division within the limits imposed by Government. The reduction was most suitably effected in Ratnágiri, as having village officers in the Vengurla and Málvan tálukas only whose work is open to inspection in the ordinary way.

In the khoti tálukas there is, as a rule, no village establishment, and in these Circle Inspectors can be utilized only for original work. The standard Circle Inspector's Rules also are not applicable to the district. Under these circumstances the rules were modified for temporary use in the two tálukas named, and the Circle Inspectors allotted to them carried out a routine of crop inspection, as exhibited below:—

| Number of Villages. | | Crop Inspection. | | Waste Inspection. | |
|---|---|---|---|---|---|
| | | Number and Area of Survey Numbers inspected. | | Number and Area of Survey Numbers inspected. | |
| Total. | Inspected. | No. | Area. | No. | Area. |
| 75 | 25 | 713 | 4,845 | 31 | 216 |
| Percentages on total | 33 | 11 | 8 | 69 | 71 |

The three Circle Inspectors examined the boundary-marks (6,750) of the survey numbers of which they made the crop or waste inspection. The waste inspection brought to light 12 encroachments, of which 2 only were noticed by the village officers. Village crop registration was found correct in only 30 per cent. of the fields.

In the rest of the district the men were employed by the Collector in such original crop and boundary-mark inspection as could be usefully made. Government waste, public roads, and village sites are not plentiful in Ratnágiri. Of 27 per cent. boundary-marks found out of repair or missing about half were put in order. The census registers of 600 villages were examined or prepared in original, and in the inspection of vital statistics 637 omissions of births and 78 of deaths were reported. Measurement cases to the number of 257 were disposed of.

The head-quarter office work is shown in the following statement:—

| Number of cases received necessitating correction in Survey Records. | Number of Akarbands. | | Number of maps and field books corrected. | Number of extracts from field books sent to Circle Inspectors. | Number of extracts from Survey books supplied to revenue officers and petitioners. | Number of maps supplied to village officers. |
|---|---|---|---|---|---|---|
| | Corrected. | Remaining to be corrected on 1st August. | | | | |
| 45 | 102 | 189 | 318 | 15 | 48 | 54 |

The akarband corrections have given much trouble owing to extra work in copying field plans and other peculiarities incidental to the Konkan Survey record, but the arrears must be coped with by the present staff, at any rate for the present, especially as the rest of the work is light. Credits on account of fees amounted to Rs. 121.

The District Inspector tested 11 measurement cases only, which is not satisfactory. His crop, waste and boundary-mark tests were fairly good, but the circumstances of the district preclude present comparison with other districts.

It has been arranged that in the khoti tálukas, pending settlement of the question of the introduction of a village staff, the Circle Inspectors should be employed chiefly on boundary-mark inspection. During the monsoon, for some years to come, they will be fully employed in the duplication of the measurer's field books, necessitated by the loss of the "Waslewár" books which were destroyed by the Survey Department before the scheme of duplication preceding transfer of the records had been devised.

I quote below the remarks of the Collector as to the usefulness of the Circle Inspector staff:—

"The general result has not, I think, been disappointing. We have got rid of all the Revenue Karkúns but two. They were not suited for the work by habits, training or

knowledge : and, having the Revenue Department to fall back on, were apt to be careless. Measurers, on the other hand, are accustomed to climbing the hills, and to field work : they have already a knowledge of surveying, and have no other appointment to fall back upon. The staff cannot settle down to work quite satisfactorily till we know what the work to be done is : whether it is to be original work, or test of work done by others : and that cannot be known for certain till Government decide whether a staff of village officers is to be created or not. I am writing to Government again on this matter, but in the meantime till we get a village establishment, we must go on on the assumption that we are *not* to get one. A start has been made, and on the whole the Inspectors have done more than I had anticipated. For the supervision over them is very imperfect. The District Inspector has, no doubt, done what he could ; but there have, I am sorry to say, been practically no tests taken by the Assistant Collectors and Mámlatdárs. This is not as it should be, and I have issued orders which will, I hope, result in better supervision in future."

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

17. The form of the Circle Book noticed in paragraph 23 of last year's report has been submitted to Government for approval.

## III.—COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

18. The eastern parts of the South Deccan and the Bombay Karnátak were affected with scarcity, which in the latter tract was so severe as to necessitate the formal declaration of famine. But nowhere in the affected parts were any remissions made, and the suspensions of land revenue were trifling, the collections being effected practically without recourse to coercion.

## IV.—MEASURES OF PROTECTION, including—

(1) *Fodder Reserves and Arboriculture.*
(2) *Extension of Communication.*
(3) *Irrigation.*

19. No applications were received for bábhul plantations on remission of assessment. The liberal takávi advances during the recent scarcity referred to in paragraph 38 below stimulated greatly the sinking of new wells and repairing of old ones. These wells are not expected to add much to garden cultivation, as high farming means capital, and is beyond the means of most cultivators. But they will be of great use as protective works, both to afford drinking water and in growing hot-weather bájri and jowári fodder crops in bad seasons. In ordinary seasons their value will be felt in enabling the ryots to avoid loss from capricious or unseasonable rainfall.

## V.—AGRICULTURAL EXPERIMENTS, INCLUDING FARMS.

### *A.—Experimental Farms.*

**Bhadgaon Farm.**

20. The rainfall (27·56 inches) was on the whole favourable. Though it commenced very late in June, and was excessive in the middle of the season, the principal crops grown on the farm—cotton, jowári, wheat and gram—yielded better than the average of the district. In spite of low prices for cotton, the net profit per acre was Rs. 12 as against Rs. 4 in the previous year. This is partly due to a reduction of the cultivated area which rendered possible better farming, the dearth of labour being one of the disadvantages with which the farm has to contend. Exclusive of the Superintendent's pay, the net cost to Government was Rs. 4,399, but of this Rs. 2,154 is capital expenditure, employed in fencing and clearing land. The valuation of dead-stock also has been reduced by more than 25 per cent., useless experimental implements having been struck off the accounts. As in the previous year, nearly half of the cost of the farm is debited to live-stock, as the Mysore herd cannot be made to pay expenses.

*General Cultivation.*

*Cotton* occupied 73 acres; the Varádi variety yielding by far the best result (187 lbs. clean cotton per acre). Bani and Jari yielded fairly, but

this may be partly due to their having followed poor linseed and gram crops. Of the American varieties, the Louisiana yielded better than the Bruder. Year after year the Varádi has proved its superiority in outturn and profit to all introduced varieties in Khándesh. It is possible that its staple may be improved by selection of seed and by careful cultivation. Probably all American and certain Broach varieties might do better with more room for growth than is usually allowed, the branching habit being very distinctly marked in them; on this point further observations are being made.

*Grains.*—Jowári occupied 94 acres and yielded 1,174 lbs. of grain per acre, the highest yield being 1,674 lbs. Roller threshing was again found successful. Wheat occupied 30 acres and did excellently with green manure (*San*, Crotolaria juncea), which also leaves in the soil a residue valuable for cotton in the next season. Gram was grown on 44 acres and yielded a profit of more than Rs. 3 per acre. The introduced giant variety of bájri from Nadiád is being widely spread by distribution of seed from the farm.

*Experimental Area.*

*Manures,—Cotton.*—The results of these experiments are inconclusive owing to sources of error which could not be eliminated. A combination of bone-meal and fish manure gave the highest yield. The sulphuric acid treatment has been found useful only in removing light seeds, but the ryot can and does attain the same object by pulling out weakly seedings.

*Manures,—Jowári and Wheat.*—Ordinary farm-yard manure gave the best results. The sulphate of copper pickle has been proved absolutely specific against smut in jowári, at the rate of ½ oz. for 5 to 7 lbs. of seed, sufficient for an acre. For a bushel of wheat (60 lbs.) 2½ ozs. in 2 lbs. of water is the quantity indicated.

*Manures,—Sugarcane.*—Castor cake is undoubtedly the most productive manure for this crop. The experiment was interfered with by failure of the canal water when the crop was ripening. This led to the juice in the cane being too thick for complete expression; native cultivators being most careful to prevent over-ripening or drying of the canes before squeeezing, for this reason.

*Fodder Experiments.*—The Reana luxurians again did well, but its comparative value as against fodder jowári, guinea-grass and lucerne has yet to be established.

*Bisulphide of Carbon* as a preservative of grain was used with success. A note on the use of the chemical has already been issued by this Department.

*Experiments on the Stability of Introduced Wheats.*—So far the experiments go to prove that these wheats maintain their colour and consistency when grown in the Deccan, but they have not yet been tried as an unirrigated crop. Arrangements are being made for their introduction into the Tápti valley, where they can be grown without irrigation, and on the results of this test their value, as an economical staple in the Presidency, will mainly depend.

*Potatoes* failed altogether owing to disease. As the seed potatoes were selected from the Poona market as being apparently free from taint, the failure of the crop shows that the disease germs may be present even where the diagnostic symptoms are not apparent to the eye.

*Ensilage.*—The loss of 36 per cent. wastage in a masonry silo filled with grass and millets is not satisfactory, and, generally speaking, ensilage is not found profitable except where fodder, otherwise too coarse to be fed to stock, can by this process be made soft and esculent.

*Live-Stock.*—The breeding herd of Mysore cattle was reduced by 104 head, and an amount of Rs. 1,931 was realized. The flock of sheep and goats has been increased in numbers, and improved by the addition of selected strains. About 30 acres of arable land were manured by folding, a system which can be profitably extended. Sheep and goats are bred to a considerable extent in Khándesh, and the distribution of the improved strains will be useful, while the flock as it increases will undoubtedly pay its way.

*Pony Breeding* has been abandoned, as unsuited to the circumstances of the farm. A Government pony stallion is stationed here for the use of breeders.

**Poona Farm.**

21. Owing to the conversion of a piece of inferior land into a thrashing yard, the cultivated area of this farm has been reduced from 34½ to 32¾ acres; 3 acres being devoted to experiments. Exclusive of the dairy, which has been worked at a profit, and of the Assistant Superintendent's pay (Rs. 1,200), the farm cost Government Rs. 1,236, as against Rs. 1,286 last year.

The greater portion of the farm was occupied by *Fodder Crops* for the use of the dairy-herd, and the interest of the experiments conducted during the year centres mainly on these crops, which are of growing importance in view of the rapidly diminishing area of waste lands and of the increasing value of dairy products. The fodders compared were Lathyrus sylvestris, lucerne, guinea-grass, Reana luxurians, kulthi (Dolichos uniflorus), sundhia jowári and kadwal (two varities of Sorghum). The first-named plant has so far proved practically a failure. Lucerne, though second to guinea-grass in yield, produces, owing to its high price, the largest net profit. But it is a delicate crop, and its young seedlings are subject to insect attacks between July and October. Guinea-grass has the highest outturn, at the same time being practically exempt from disease and insect pests and growing well under shade trees. Reana luxurians (teosinte) gave promise of being a useful fodder, but it does not appear to have any advantage over jowári beyond that it is claimed to be a perennial plant. Its permanency, however, is shown by the year's results to be more than doubtful. The indigenous fodder crops are all seasonal, and their yields are necessarily comparatively low. The kadwal or hot-weather jowári yielded best, but cost heavily for irrigation; the sundhia or Gujarat fodder jowári came next in yield, appearing, however, to be rather delicate in the Deccan climate. Kulthi is rather a wasteful fodder for well-fed cattle, as they reject the coarser stalks.

The *Sugarcane* plots have not yet had time to show the value of manures applied. They were attacked by the sugar-borer, and it was found best to cut and burn all affected canes.

The study of improved *Potato* cultivation was proceeded with, and measures to combat the prevalent disease were actively pursued. A separate note on this subject has been published, and will be supplemented by a further publication, when experiments now in progress, have been worked out.

22. The *Dairy-Herd* was increased from 55 to 93 head. This is the maximum number that can be kept on the farm, and, unless a stock farm is established, some of the young stock will have to be sacrificed. Much of the benefit arising from the Government dairy-herd will thus be lost, as one of the chief objects of its maintenance should be the study of the results of breeding for milk, a matter now for the first time coming into prominence and hitherto almost outside the purview of the native cattle-breeder.

The benefits of initiative and example in the direction of dairy improvement, even on the present limited scale, have proved considerable. In addition to points of general progress mentioned further on, Government has directly profited by the supply to the garrison hospitals and prisons of dairy products of greatly superior purity and quality to those obtainable from gaolis, and at much lower rates. The actual saving in cost during the year over the lowest tenders by gaolis amounts to Rs 2,650. The herd was maintained at a net profit of Rs. 613, which would have been larger but for the high prices of food and fodder during the year, these having to be bought in large quantities owing to the want of grazing ground.

Nine natives received tuition in the improved dairy methods. Of these one was sent by the Kolhápur State and one was trained for the Local Board dairy at Hyderabad (Sind). The dairy manager, trained by Mr. Keventer, has left the farm, and is working in the Central Provinces on his own account, with the assistance of the Agricultural Department.

It is also satisfactory that the separated milk, the disposal of which was formerly uncertain, now finds a ready market in Bombay and Poona, though at

cheap rates. Elsewhere, in Gujarát, private dairy concerns on the new system established for the supply of cream for butter-making in Bombay, now utilize the separated milk for curd and máwa, having formerly allowed it to go to waste. The wide extension of the new appliances, first introduced on the Poona Farm, is most gratifying, 65 separating machines having been sold by the Bombay agency of the Dairy Supply Company within the last two years; and it is worth noticing that the butter produced has for some time been successfully exported to Zanzibar and elsewhere. The agent is reported to have exported it as far as China with a fair margin of profit. These ventures open out considerable trade possibilities, due entirely to the superior quality and keeping properties of the butter, and have already led to a large increase in the milk business of outlying districts. At Nadiád, for instance, where 3 machines are at work, the price of milk has risen appreciably, though still less than half the Bombay price.

A note by Mr. Mollison on the various breeds of milch-cattle in use at the Government Dairy, on the results of feeding, and on the comparative value of fodder plants for milk production, is added in the form of an appendix.

23. *The Ganesh Khind Gardens* worked at a loss of Rs. 214, considerable outlay having been incurred in manuring, planting and in clearing the scrub-growth. The mango crop fetched Rs. 175 as against Rs. 85 last year, and the return from this source may be expected rapidly to increase. The trees are all now carefully tended and watered, and a large number of grafts have been planted. A plot has been laid out for the cultivation of good varieties of oranges and figs. These operations have cost too much to leave room for other immediate improvement, but the gardens are now cleared and in good order, and as the returns from the plantations begin to come in, steps may be taken to restore their ornamental character, which had disappeared before they were taken over by this Department.

**Nadiád Farm.**

24. The farm management has greatly improved. The cost of cultivating the cropped area (7 acres 26 gunthás) was Rs. 346 and the receipts amounted to Rs. 323. The loss was, therefore, Rs. 3 per acre as against nearly Rs. 12 last year, and this result is not unfavourable considering the necessarily high cost of cultivating small plots. As the new experimental scheme is only in its first year, no further notice is needed, except that the potato crop failed owing to disease, and that the Ghogári cotton, which is making head-way in Surat and Broach, gave over 300 lbs. of clean cotton per acre, the ordinary Broach and the American varieties yielding 264 and 35 lbs. respectively. The Association continues to maintain its seed store, and seed was sold to sow 400 acres; this means a large produce of selected quality available for private distribution in its turn. The taste for selected and tested seed calls for every encouragement, this being a matter which cultivators are apt to neglect, sometimes to their considerable loss. The Association has arranged to exhibit its samples more effectively, and in this way also good may be done in the direction of awakening interest and curiosity in new and selected grains. The Association paid a contribution to the veterinary dispensary, and generally shows a praiseworthy activity.

**Sind Farm (Hyderabad).**

25. The District Local Board has had charge of the farm during the year. In all about 70 acres were cultivated. In spite of an unfavourable season, the farm cleared a profit of Rs. 261, or about Rs. 3-12-0 per acre. The future of the farm is still undecided, partly owing to the difficulty of finding a competent Superintendent.

**Empress Gardens.**

26. The management of these gardens has been vested in the Agri-Horticultural Society of Western India for a period of five years commencing from 1st April 1892, Government guaranteeing the Society against any deficit upto Rs. 3,000 per annum. The Society binds itself to hold the property in trust for Government, to furnish flower and vegetable seeds at low rates to soldiers of the garrison, and to maintain the ornamental character of the gardens for the public use and for purposes of botanical illustration and research.

The total expenditure during the year ending March 1892 was Rs. 7,089, the receipts being Rs. 6,591, and the net cost to Government Rs. 498 as compared with Rs. 3,022 in 1890-91 and Rs. 3,422 in 1889-90. The large reduction in the net cost is due mainly to reduction of the salary of the Superintendent from Rs. 320 to Rs. 200 per mensem and to the recovery of Rs. 499 of old outstandings. Considerable improvements have been made in the ornamental portions of the gardens, and the fern and plant houses are in a satisfactory condition. Much, however, remains to be done, and for the present a sum of Rs. 1,000 has been allotted to clear away jungle growth and for planting fruit-trees on portions of the land hitherto neglected. The Society has the advantage of the services of Mr. Mollison and of Mr. Navroji Padamji, who have consented to serve as Joint Honorary Secretaries. The accounts continue to be audited in this office, and Mr. Reid, Commissioner of the Division, has acted as President.

*B.—Experiments on various Indigenous and Exotic Products.*

**1. Wheat.**

27. The experiment with the Muzáffarnagar soft-white wheat in Thar and Párkar was continued with decided success during the year under report, the area occupied by this variety rising from 3,166 acres in the previous year to 5,435 acres, or $\frac{1}{6}$th of the total wheat area in the Nára valley. The yield also, more than $6\frac{1}{2}$ maunds per acre, or about 5 times the seed sown, compared very favourably with that of last year. This result is attributed to absence of rust and confinement of the cultivation to lands along the Mithráo Canal, which are superior to those of the Tharwah. The following table shows the details :—

| Kind of Seed. | Area. | | Seed. | | Outturn. | |
|---|---|---|---|---|---|---|
| | A. | g. | Mds. | srs. | Mds. | srs. |
| New seed imported by Government ... | 177 | 8 | 233 | 33 | 1,300 | 4 |
| Acclimatized seed being Government share of previous year's produce ... | 481 | 18 | 625 | 33 | 2,570 | 25 |
| Acclimatized seed being Zemindár's share ... ... ... ... ... | 4,776 | 33 | 6,093 | 9 | 30,191 | 2 |
| *Add*— | | | | | | |
| Reaper's share ... ... ... ... | ..... | | ..... | | 1,703 | 0 |
| Total ... | 5,435 | 19 | 6,952 | 35 | 35,764 | 31 |
| Average per acre ... ... ... ... | ..... | | 1 | 11 | 6 | 23 |

*Note.*—1 maund = 80 lbs.

This wheat ripens quicker, gives a better yield, and fetches prices higher by two to four annas, per maund, than the Sindi variety, being specially valuable for export. Its drawbacks are that it is unable to stand as much cold as the Sindi wheat, and is more subject to insect attacks on account of its greater softness. Government have sanctioned a further grant of Rs. 1,000, and the experiment will be continued next season.

*Pissi Wheat.*—In Morvi, Káthiáwár, 11 maunds and 8 sers of Nágpur Pissi wheat was sown in October 1891 in black cotton soil, on which a crop of sugarcane had been raised previously. The crop was watered twice a week, and the yield was 6·5 times the seed. This variety is said to mature more quickly than the ordinary variety and fetches a higher price by 2 annas per maund. The experiment will be continued.

**2. Cotton.**

28. In the Nára valley, the Dhárwár American cotton promises to give good results. The Karáchi Chamber of Commerce considers the sample submitted superior to the Sindi in quality and length of staple. In England it was valued, at a time when the price of American cotton ruled phenomenally

low, at $3\frac{1}{2}d.$ per lb.; the quotation for fine Sindi being $3\frac{1}{4}d.$; but under favourable circumstances the margin is expected to extend to $1d.$ This success has encouraged the extension of the experiment, and a larger area has been sown with fresh seed and with the seed from the previous year's crop. In the Presidency Proper the American cotton has failed to establish its superiority to the indigenous staples owing to its comparatively small outturn and tendency to destructive hybridization, and its area is being steadily encroached upon by the Varádi in Khándesh and by the Kumta in the Southern Marátha Country. It is a failure in Gujarát. In an experiment on the Nadiád Farm the indigenous Broach variety yielded 264 lbs. per acre against only 35 lbs. of clean cotton from American seed. The attempts to introduce this variety in Morvi have failed for the present owing to scarcity of water.

### 3. Arrowroot.

29. As last year, Mr. Gogte of Dápoli (Ratnágiri) planted 10 acres with about 8 cwts. of arrowroot; but the monsoon rains of 1891 being unfavourable, the crop suffered, and the outturn was reduced by three-fourths. The produce sells at the rate of Rs. 20 per cwt. in Bombay, the retail bazár rate being 4 and 3 annas per lb. with and without tins, but the demand is small. A trial consignment of 4 cwts. was sent to England, which fetched $3d.$ per pound, the rate for Bermuda arrowroot being $7d.$ Bad packing and the smallness of the consignment may account for this low rate, as the arrowroot is of the Bermuda variety. A larger consignment of two tons has now been shipped, and, if a low exchange continues, Mr. Gogte thinks that the $3d.$ rate will leave him a margin of profit, if he can send sufficiently large quantities. A higher price should be obtainable when the Indian-grown arrowroot is better known, and the cultivation of this staple, which may profitably supplant in some places the poorer millets of the Konkan, deserves every encouragement. The waste water from the arrowroot manufacture is reported to be a good restorative for exhausted land.

### 4. Coffee.

30. Mr. Gogte's experimental coffee plantation yields well, each tree giving from one to two pounds of berries. At this rate an acre, with about 600 trees, would yield a net profit of Rs. 100 to Rs. 200 even at the low rate of 6 annas per pound. Coffee would economically be another good substitute for the poorer hill crops, but its growing requires capital, and the example of a paying plantation is required.

### 5. Borneo Tobacco.

31. There being no local demand, the Borneo tobacco was abandoned on the Hyderabad Farm. On the Nadiád Farm it did well, yielding 1,010 lbs. of dry leaves per acre against 550 lbs. last year.

### 6. Strawberry.

32. The Saháranpur strawberry plants continue to flourish at Mahábaleshvar, while the English plants have all died. The heavy rainfall necessitates the removal of the plants each monsoon to lower altitudes.

### 7. Indigo.

33. As last year, indigo was persevered with in Junágad only, and here, owing to heavy rain, the seed sown on 35 acres was lost. Five acres were, however, resown, and 37 lbs. of the dye were obtained from 3 acres, the other portion of the crop being allowed to seed. The dye was sold at the rate of Re. $1\frac{1}{4}$ per pound.

### 8. Date-Palm.

34. The progress of the date-palm plantations in the Presidency Proper, excepting in the forests of the Northern Circle and in a few other instances, may be said to be fair, especially in the Native States of Idar, Gondal, Morvi and Junágad. All the trees in the Chorási division (Surat) died in the hot weather, and in Porbandar few of the plants survive.

Reports are discouraging from the forests of the Northern Circle, in which nearly $\frac{1}{3}$ of the seed was distributed. Whole plantations in South Thána, Násik and Sholápur, Khándesh and Sátára succumbed in the hot season, and in Ahmadnagar the seeds failed to germinate. These results may partly be ascribed to

want of sufficient care, of which young date trees stand in great need, but which "can only exceptionally be given by guards who have large areas to patrol." Offsets appear to be more delicate than seedlings.

In Sind the exceptional heat towards the end of June followed by heavy rain destroyed the young Djereed palms planted at Karáchi in the saline soil along the road sides, and seed generally failed to germinate in the Tatta táluka. On the other hand, the trees in the Merewether Garden (Karáchi) and in Mirpur Sakro are expected to bear fruit in about three years. There are about 500 fair plants and seedlings in the Burns Garden, and more than 700 are doing well on the Sehwán road. In the Hyderabad district, the plantations in Nausháhro, Kandiáro and Tándo divisions are in good condition, and the climate seems favourable, but in the Economic Garden, Hyderabad, out of 319 remaining alive last year only 36 plants have survived the recent floods. In Shikárpur (except in the Kámbar táluka, where soil and water are too saline) the trees are thriving and, in some cases, have attained a height of 6 feet.

**9. Divi-divi.**

35. The Bhadgaon produce was not sold this year. That of the road-side trees in Dhárwár fetched Rs. 20 at auction.

**10. Potato Disease.**

36. This subject has been noticed above (paragraph 21), and it need only be added that the disease has been found to be far more widely distributed than was at first thought, and to threaten the crops of the whole peninsula. Surgeon-Colonel Cunningham's microscopical investigations are being continued, and elaborate experiments are being pursued in the practical treatment of the crop and of diseased soils. The results will be important, whether success is attained or not, and will be made public in due course. It is satisfactory to find that the enquiry initiated by this Department has been taken up with interest in many parts of the country. The disease is now shown not to be identical with the European blight, and it attacked all the new stocks imported last year, however robust. Treatment of the soil is clearly indicated, and the experiments now in progress are being conducted on this line; while improved methods of cultivation, tending to a more healthy habit of the plant, are also under trial. The investigation will be as thorough as possible, potatoes being one of the most valuable of our garden crops.

*C.—Utilization of Bones.*

37. Considerable attention has been paid during the year to the export of bones and their utilization as manure. The yield of each district is not accurately ascertainable, but the following provincial figures may be taken as approximately correct—Gujarát 1,640 tons; Deccan 6,017 ; Karnátak 544 and Konkan 500—total 8,701 tons. These were all exported to Bombay, and a few tons were sent to Mysore from Dhárwár. The imports into the port of Karáchi from Sind excepting Shikárpur (figures unascertainable) and Karáchi, are estimated at 1,687 tons.

*Collecting Agency and Middlemen.*—The classes that collect bones are, as a rule, low-castes and wild tribes. The middlemen are mostly Mahomedans; more rarely Pársis and Maráthas. Bombay merchants occasionally send agents into the mofussil, but generally the middlemen make consignments direct to Bombay.

*Treatment before Despatch.*—Mostly, they are subjected to no treatment, being forwarded to Bombay raw; sometimes they are broken roughly, or washed and scraped, or dried in the sun.

*Prices.*—The price obtained by the collecting agency from the middlemen varies from Rs. 7 to Rs. 20 per ton according to quality, distance from a railway station, &c. Dry bones command a slightly higher rate than when fresh. In Karáchi city what are called "boiled bones" come into the market, *i. e.*, remnants of cooked food, which are inferior to raw bones. The middlemen sell to shippers at rates from Rs. 20 to Rs. 40 or 50 per ton.

*Use in Agriculture and Preparation before Use.*—Bones are used for manurial purposes to a very small extent in the Presidency Proper. In the Niphád, Bársi and Hángal tálukas, bones in powder or in small pieces are used occasionally as an application for trees, chiefly mangoes. In the Poona district a Musalman land-holder uses bones on a large scale for fruit-trees, rotting them with stable droppings and moist earth combined with prickly-pear roasted and cleared of its spines. From Surat a small quantity were despatched to Gandevi in the Gáekwár's territory for use in sugar manufacture. In Kohistán and elsewhere in Sind burnt bones are sometimes used on melon-grounds when the plants are injured by insects. In the gardens at Karáchi, bones rotted and mixed with street sweepings have been used as a general fertilizer. The experimental farms have not yet furnished definite conclusions as to their comparative manurial value in the Deccan, though composts with a bone admixture have given good results. The caste prejudice against their use is gradually wearing out. But in their more costly form as manufactured for export it is not likely that bones will return a profit to the ryot. Roughly crushed by hand, or in a common mortar mill, and softened by storing in earth moistened with stable urine and water, a useful and cheap compost is produced which may come into use with time.

*State of Trade.*—Exports from Panch Maháls, Sátára, and Thar and Párkar are increasing and, in a less degree, those from Broach, Thána, Kolába, Ahmadnagar and Belgaum. Elsewhere the trade is either steady or decreasing. The total exports from Bombay were considerably above those of the preceding year. The following table shows exports during the five years ending 1891-92. The exports are almost wholly to the United Kingdom:—

| | | 1887-88. | 1888-89. | 1889-90. | 1890-91. | 1891-92. |
|---|---|---|---|---|---|---|
| Bombay. | Quantity in Tons ... ... | 11,214 | 11,574 | 16,306 | 13,653 | 16,281 |
| | Value in Rs. ... ... | 6,63,988 | 6,71,430 | 9,46,969 | 8,23,584 | 9,35,553 |
| Karáchi. | Quantity in Tons ... ... | 2,876 | 8,209 | 12,022 | 21,304 | 6,633 |
| | Value in Rs. ... ... | 1,21,108 | 3,68,057 | 6,80,711 | 11,03,033 | 3,39,423 |

*D.—Takávi Advances.*

| Division. | 1890-91. | | | 1891-92. | | |
|---|---|---|---|---|---|---|
| | Under Act XIX of 1883. | Under Act XII of 1884. | Total. | Under Act XIX of 1883. | Under Act XII of 1884. | Total. |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Gujarát ... ... | 7,775 | 6,922 | 14,697 | 27,865 | 13,183 | 41,048 |
| Deccan ... ... | 17,730 | 13,646 | 31,376 | 2,18,511 | 21,399 | 2,39,910 |
| Karnátak ... ... | 1,33,445 | 175 | 1,33,620 | 6,96,057 | 98,861 | 7,94,918 |
| Konkan ... ... | 4,200 | 253 | 4,453 | 18,950 | 1,635 | 20,585 |
| Sind ... ... | 12,350 | 49,593 | 61,945 | 26,508 | 84,809 | 1,11,317 |
| Total ... | 1,75,500 | 70,591 | 2,46,091 | 9,87,891 | 2,19,887 | 12,07,778 |

38. Famine and scarcity have brought the takávi system prominently to the front this year, in the six affected districts of the Karnátak and Deccan. Poona, which had claimed no advances since 1887-88, took Rs. 92,515 ; Dhárwár, Rs. 3,20,604 against Rs. 61,280 last year, of which Rs. 2,82,031 are estimated to have been utilized for works in relief of famine ; and the following figures of advances in the remaining four districts are no less significant, though the proportion directly due to scarcity is not ascertained :—

| District. | 1890-91. | 1891-92. |
|---|---|---|
| Belgaum ... ... | 69,965 | 1,90,575 |
| Bijápur ... ... | 2,375 | 2,83,739 |
| Sátára ... ... | 4,515 | 45,083 |
| Sholápur ... ... | 3,165 | 46,617 |

These advances were largely used in sinking new wells and repairing old ones, in building bunds, and in eradicating deep-rooted grasses. They averted a vast amount of distress, saved a large expenditure on relief works, and have produced permanent agricultural improvement. For the mild type of famine, which prevailed in the Karnátak, they are at once a cure and a preventive, and constitute a measure of relief greatly superior to that afforded by relief works with their contingent evils of pauperization and waste.

The Thar and Párkar district on the other hand took rather less takávi than last year in spite of severe scarcity, the population being largely nomadic and pastoral. Thána and Ratnágiri took none, for reasons given in last year's report. In Gujarát, the Panch Mahále, Broach and Surat, which received no advances last year, claimed large sums, and in most of the other districts a considerable stride has been made in this direction. More loans would have been made in Kánara (Rs. 18,950 against Rs. 4,200) had funds been available ; in the Upper Sind Frontier (Rs. 41,018 against Rs. 1,800) the tardy inundation alone prevented larger advances being issued. Results throughout are encouraging, though it will be some time before the cultivators' " reluctance to offend the ancestral sávkár " as noted by the Collector of Broach, or " the threats of their creditors " (Hyderabad) and similar deterrent influences can be fully overcome. Instances of the misuse of these advances may be expected, but no complaints have yet been received, though a suspicion has in some cases arisen that money may have been borrowed from Government to be re-lent at higher interest. This could hardly occur on any large scale without discovery.

*E.—Locusts.*

39. Locust attacks this year were confined to Sind, the province most open to their depredations. They appeared several times between March and May, but passed away without doing any damage. In August and September, they caused slight damage in Karáchi, Upper Sind Frontier and Thar and Párkar, and in October they appeared in greater numbers, causing more serious injury to crops. Crickets attacked the young kharif jowár in June, July and August in the Upper Sind Frontier district.

*F.— Improved Agricultural Implements.*

40. Messrs. Walter A. Wood & Co.'s mower and rake worked satisfactorily on the Government farms, and were noticed in last year's report (paragraph 45). The mower was found to perform the work of 50 men, and to cut an acre of grass at a cost of about 10 annas, against Rs. 2-8-0, the cost of manual labour. One machine can cut about 200 acres in a season, thus effecting a saving in one year of Rs. 350, or its whole cost. The mower is valuable, especially because it is possible by its use to make green hay in quantity at a season when agricultural labour is difficult to obtain. Its high initial cost, however, and its liability to damage on uneven and stony soil are against its general adoption. The rake does its work admirably.

The Planet Jr. hoe, also noticed in previous reports, has again been found useful on the experimental farms, but its cost is against it, and it has made no way with the ryot. Cast steel 8-inch Drow hand hoes imported by Messrs. Vishnu Sadáshiv & Co., of Poona, were used on the Poona Farm for interculture of potatoes, lucerne and other ridge crops. These are light, handy and cheap.

Mr. Benson, Assistant Director of Agriculture, Madras, visiting the Bhadgaon Farm in 1890 suggested the use of stone rollers, as practised in the Madras Presidency, for threshing jowári. It appears that a large number of rollers having been made in Belláry for purposes of famine relief, the cultivators tried them for this purpose with success. During the past season, jowári on the Bhadgaon Farm was so threshed, and the process may eventually come into more common use. The method is briefly as follows. The heads of grain are laid out to a depth of six inches on the threshing floor and the roller, (an ordinary stone road roller), passed and repassed over the pile. The operation is facilitated by stirring the pile by means of a fork, or hand rake, after each journey of the roller. The grain, thrashed in this way, has the glume more thoroughly removed, appears cleaner, and the threshing occupies less time and a smaller number of bullocks than by the ordinary process of treading.

### *G.—Trade in Wheat.*

41. Appendix B shows the exports of wheat from the ports of Bombay and Karáchi since 1880. As anticipated in last year's report, the exports for 1891 exceed all previous record. English prices reached their highest limit in September 1891. These declined as it became known that India and the United States could supply more than the deficiency of the Russian harvest, and that large supplies had been sent from Russia before the prohibition of export, but a low exchange continued to stimulate the volume of trade. Of the total Indian exports, 47·6 per cent. were from Bombay, 36·7 per cent. from Karáchi, and 15·7 per cent. from Calcutta.

### *H.—Cotton Trade.*

42. The year was not a favourable one for the cotton trade; the outturn was short and prices at the same time fell, owing to the unusually abundant American crop. The depression of trade and manufactures following bad harvests in Europe was a further adverse influence. A good demand from Europe, however, set in in the latter part of the cotton season, which reduced the fall in the exports from Bombay to 6 per cent.

It is interesting to note that during the eleven years ending 30th June 1892 Bombay cotton exports to the United Kingdom have declined from 3,957,000 maunds to 344,000 maunds, *i. e.*, from 51·4 per cent. to 6·5 per cent. of the total cotton exports from the port. On the other hand, exports to the Continent have shown a tendency to rise, and during the last three years exports to Eastern ports have greatly increased; Japán being the latest and largest consumer. Thus, as remarked last year, the Indian market has not declined, and no harm has accrued to the cotton-grower from the displacement of his short staples from the Lancashire mills. The market has changed place, and that is all.

A new feature in the season's trade was a small importation of American cotton, prompted by its low price, for local manufacture of fine counts. The experiment has not, it is believed, been successful, and it is not likely to indicate any new departure on a large scale so long as the finer Indian cottons continue to be exported.

### *I.—Saw-gins in Dhárwár.*

43. The number of steam-gins for cleaning exotic cotton in Dhárwár is 18, the same as last year, the number of hand and bullock-power gins being also maintained.

The Government gin-factory at Hubli has been abolished, as private and railway workshops now suffice for repairs to these gins, and a central factory is no longer required.

## J.—*Forecasts.*

44. No additions were made during the year to the crops for which forecasts are made. The following statement summarizes the final forecasts reported:—

*(Figures in thousands.)*

| Crop. | Average. | | | 1890-91. | | | 1891-92. | | | Estimated outturn, 1891-92. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | British Districts. | Native States. | Total. | British Districts. | Native States. | Total. | British Districts. | Native States. | Total. | British Districts. | Native States. |
| | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Acres. | Bales. | Bales. |
| Cotton ... ... ... | 2,926 | 2,734 | 5,660 | 3,159 | 2,765 | 5,924 | 2,570 | 2,670 | 5,240 | 388<br>**60·4** | 327<br>**61·9** |
| | | | | | | | | | | Tons. | Tons. |
| Wheat ... ... ... | 2,346 | 583 | 2,929 | 2,351 | 513 | 2,864 | 2,146 | 474 | 2,620 | 388<br>**404·7** | 156<br>**735·8** |
| | | | | | | | | | | Cwts. | Cwts. |
| Sesamum ... ... ... | 423 | ... | 423 | 326 | ... | 326 | 343 | 356 | 699 | 821<br>**293·2** | 914<br>**·345** |
| Linseed ... ... ... | 264 | ... | 264 | 209 | 24 | 233 | 217 | 23 | 240 | 337<br>**174** | 20<br>**98·1** |
| Rapeseed ... ... ... | 114 | ... | 114 | 254 | 56 | 310 | 165 | 46 | 211 | 433<br>**293·6** | 140<br>**344·9** |

*Note.*—Figures in black type show acre rate in pounds.

It is satisfactory to find that the forecasts for British districts of cotton and wheat areas have, as formerly, proved to be very closely approximate to actuals, and that the forecast of sesamum, which is largely grown as a row crop and therefore peculiarly difficult to estimate, was this year even closer to the mark :—

| Crop. | Area as returned in | | Percentage difference. |
|---|---|---|---|
| | Forecast Returns. | Agricultural Returns. | |
| Cotton ... ... ... ... | 2,570,299 | 2,621,899 | —1·96 |
| Wheat ... ... ... ... | 2,145,874 | 2,157,139 | —0·52 |
| Sesamum ... ... ... ... | 342,805 | 341,233 | +0·46 |

Linseed was out by 12 per cent.; rapeseed, which is almost wholly confined to Sind, where crop estimates are apt to be faulty and the unsurveyed area is large, was, as last year, reported with so much inaccuracy as to vitiate the forecast altogether.

Arrangements have been made for the prompter distribution of forecast reports. They were hitherto delayed by submission to the Government of India before publication, but are now printed by the Local Government Press and distributed direct, and it is hoped that their utility may be enhanced by the greater expedition secured.

## K.—*Agricultural Shows and Exhibitions.*

45. The shows subsidised by Government were :—

| Province. | Place. | Kind of Show. | Date. | Prize money. | Contributions. |
|---|---|---|---|---|---|
| | | | | Rs. | |
| Deccan ... ... | Poona ... | Horse Show ... | 22nd September 1891. | 1,815 Breeder's classes and 930 Fancy classes. | Government grant Rs. 2,000; District Local Board Rs. 500; subscriptions Rs. 1,000. |
| Do. ... ... | Ahmadnagar... | Horse and Cattle Show and Agricultural Exhibition. | 9th November 1891. | 1,557 | Government grant Rs. 1,000; District Local Board Rs. 300. |
| Gujarát ... ... | Ahmadabad ... | Horse Show ... | 8th February 1892. | 2,425 | Government grant Rs. 2,000; His Highness the Gáekwár Rs. 1,000; District Local Board Rs. 1,000; other Native Chiefs Rs. 730. |
| Sind ... ... ... | Shikárpur ... | Do. ... ... | 11th January 1892. | 4,510 | Government grant Rs. 2,000; Upper Sind Frontier District Local Board Rs. 1,000; Shikárpur District Local Board Rs. 3,750. |

*Poona Horse Show.*—The number of exhibits was 255, showing a falling off of 48 animals from the previous year. This was due to the weeding out necessitated by the reduction of the Government grant from Rs. 3,000 to Rs. 2,000. The show was a poor one, the only good classes being the brood-mares and yearlings. Some young stock was purchased for the Ahmadnagar Nursery, but no remounts were secured, and no less than Rs. 1,220 out of Rs. 3,035 advertized were withheld. Experience proves that, in the absence of an extended nursery system, most of the produce of the stallions is lost to Government.

*Ahmadnagar Horse and Cattle Show and Agricultural Exhibition.*—The show was open to all comers and, being well advertized, the number of outside horses rose from 31 to 81, the total number exhibited being 271 against 160 at the last show. The increase in numbers was not accompanied by any improvement in quality. Branded mares and yearlings only made a good show. The geldings were, as usual, insignificant. Gelding prizes are of doubtful value, and might, without abolishing them entirely, be largely restricted. It is almost proved that castration cannot be made general on the plan of liberal prizes, and there is the further risk that, under a false stimulus, good animals may be castrated, while the weeds are left to perpetuate the species. Only 4 animals were purchased by the Remount Agent as against 12 at the show of 1890, but a few purchases on behalf of Government were made in the district during the year. Rs. 890 were given in prizes, of which Ahmadnagar took Rs. 485.

In the cattle branch the show exhibited a small improvement, the number of animals rising from 105 to 124, but on the whole the display was indifferent; Rs. 123 being withheld out of Rs. 360 provided for prizes. Cattle shows are of comparatively recent date, and may be expected to become more popular with time; meanwhile efforts are being made in other directions to improve cattle-breeding, which these shows may assist.

In the agricultural produce branch the exhibition of grains and seeds was larger than formerly, and Rs. 256 were awarded in prizes. But the exhibits were mere bazár samples, mostly of the previous year's crop. Fruits and vegetables were a poor show, and mainly from private gardens. In the miscellaneous class, cotton, sugarcane, wool, &c., were nothing more than fair samples of the produce of the district. Fodder crops, such as lucerne and guinea-grass, are beginning to attract attention owing to the demand at the Remount Rearing Depôt.

The Poona and Ahmadnagar shows are in future to be amalgamated, an arrangement which will offer a prospect of one good show at least.

*Ahmadabad Horse Show.*—As far as numbers are concerned, the show was successful, the exhibits (811) showing an increase of 108 over 1891, which is the more marked, as worthless animals were excluded. But the promise of 1891 was not fulfilled as regards quality, the exhibits all round being a poor lot. The anticipated increase in the number and quality of geldings shown was not realized, and the prizes awarded to castrated animals were given merely *in misericordiam.* The remount class fell from 62 to 30, and no remounts were purchased. Rs. 2,425 were awarded in prizes against Rs. 2,575 last year, the amount of prize money offered being Rs. 3,025. The entire absence of entries in three of the gelding classes accounts for this restriction of the prize money.

*The Sind Horse Show* was held this year at Shikárpur. Though the number of exhibits (870) was greater than the average of the previous 5 shows held at this place, it is far below that (1,323) of the two shows held at Jacobabad, and the question of the permanent localization of the show at Jacobabad is under consideration. In point of quality, however, this show beat any held hitherto in Sind, the brood-mares and mules being particularly good. The young stock also was excellent, the Remount Department purchasing 13 animals for the Nursery. The gelding class also exhibited some improvement. The 2 to 4-year-old fillies were poor, the best of this important class being bought and deported before the show by private purchasers.

Only 50 remounts were obtained, as against 147 at the Jacobabad show of 1891, and 167 at the Shikárpur show of 1890; and only one mule. Many purchases were, however, made before the show opened, and 29 mules were bought after it was over. Of the prizes awarded, Shikárpur took Rs. 1,205, Jacobabad Rs. 1,165, Beluchistán Rs. 1,705, and Afghanistán the rest (Rs. 335).

The fruit and vegetable shows were successful, and Rs. 237 were awarded in prizes.

No show was held at *Chinchli* (Kolhápur) or at *Rájkot* (Káthiawár).

## VI.—HORSE AND CATTLE BREEDING AND VETERINARY ESTABLISHMENT.

### *Civil Veterinary Department.*

46. The appointments now comprised under the Bombay Civil Veterinary Department are those of (1) the Superintendent, Civil Veterinary Department; (2) the Principal, Veterinary College; and (3) the Superintendent, Bacteriological Survey. The title of the first-named officer has been altered from that of "Superintendent, Horse-breeding Operations," to include among his duties the care of agricultural stock.* The Clinical Assistant to the Imperial Bacteriologist has not yet been appointed.

* G. R. No. 4992, dated 15th June 1892.

### *Horse Breeding.*

47. The number of stallions has fallen by 5, being now 99; the effective strength rising from 87·1 to 88·67. The average annual cost (Rs. 385-12-2) per stallion is 12 per cent. above last year, the highest since 1879-80, due to an abnormal dearness of fodder and grain. The total number of mares covered was 3,087, an average per stallion of 34·81 as against 37·5 in the previous year. The number of mares branded (809) fell by 22·66 per cent. owing to the unfavourable nature of the season, and the number of remounts purchased (435) fell by 24 per cent. Castration has made some progress, the number of animals castrated being 320 as against 127 in the previous year. Castration is one of the prescribed duties of the district Veterinary Assistants employed in the Civil Veterinary Department, and the attention of Collectors has been invited to this. One Committee (Nadiád) has arranged to bear the cost of feeding patients castrated at the dispensary.

*Mule-breeding* is at present confined to Sind, and is progressing well. The number of mares covered and their average per donkey stallion have increased from 868 to 1,019 and from 41 to 43, as compared with the previous year.

Horse stallions stationed at dispensary towns are now under the supervision of the Veterinary Assistants, and the Superintendent, Civil Veterinary Department, has made arrangements to get them properly exercised.

### *Veterinary Dispensaries.*

48. Under this head considerable progress has been made. Dispensaries have been started at Belgaum and Karáchi, and the establishment of a dispensary at Jalgaon has been sanctioned. Itinerating Veterinary Assistants have been employed in Kaira and Belgaum, and the appointment of one for Khándesh has been approved by Government. The District Board of Násik also proposes to entertain an Itinerating officer. The Ahmadabad and Nadiád dispensaries are in receipt of increased grants from Municipal and Local Funds. The Dhulia dispensary receives fees for the treatment of patients, the property of well-to-do persons. The detailed remarks following relate to the already established dispensaries of Ahmadabad, Nadiád, Dhulia and Násik. The Poona hospital is still under the College of Science; Belgaum did not commence work till after the close of the financial year; and Karáchi operations are only beginning. In the four dispensaries 2,628 animals were treated as against 2,503 last year. The comparative results of treatment are as follows:—

| Year. | Total Animals treated. | Percentages shown on Total Animals treated. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Cured. | Relieved | Died. | Returned incurable. | Results unknown. | Remaining under treatment at end of year. |
| 1890-91 ... ... | 2,503 | 51·1 | 19·2 | 3·2 | 2·6 | 21·5 | 2·4 |
| 1891-92 ... ... | 2,628 | 54·0 | 16·3 | 2·9 | 2·8 | 21·6 | 2·4 |

The figures indicate progress, though there is ample room for improvement. The large figures under "results unknown" were explained last year, but the Principal of the Bombay Veterinary College also points out that they should be open to diminution by more care and tact in dealing with the owners of cattle brought for treatment.

*Ahmadabad.*—The dispensary was inspected by the Director and by the Superintendent, Civil Veterinary Department. The year was free from epidemic disease, foot and mouth disease only existing in a mild form. There were 811 out-patients and 114 in-patients as against 833 and 79 last year, the larger proportion of in-patients pointing to good management. The institution is also gaining in popularity in the district generally, the number of village patients rising from 39 to 189 and public subscriptions from Rs. 59 to Rs. 100. Visits to private stables and animals examined also increased. It is to be regretted that the District Board does not see its way at present to the entertainment of an Itinerating Assistant. Receips Rs. 1,845, expenditure Rs. 1,189.

*Nadiád.*—This dispensary was also inspected by the Director and by the Superintendent, Civil Veterinary Department, and was found in good order. At Nadiád 975 cases were treated as against 871 last year—844 at the dispensary and the rest in villages where outbreaks of foot and mouth disease and rinderpest occurred. The daily average attendance was 14·5 against 13 last year. There is no in-patient accommodation, and the construction of the building promised by Sardár Ráo Bahádur Bechardás Viháridás is awaiting settlement of site. Receipts Rs. 1,595, expenditure Rs. 1,446.

The Itinerating Assistant commenced work from 12th October 1891, and up to the end of March treated 512 animals, with a daily avarage of 8. Receipts Rs. 330, expenditure Rs. 437; the deficit Rs. 107 being made good from the funds of the stationary dispensary.

*Dhúlia.*—Owing to the resignation of the Veterinary Assistant the dispensary was closed for two months, and a fall from 471 to 388 results in the number of cases treated. Of these, 67, as against 54 last year, were in-patients. The daily average of 10 patients is low. Receipts Rs. 1,300, expenditure Rs. 870. The dispensary is insufficiently and unsuitably housed in the Pinjrápole.

*Násik.*—The total number of patients rose from 249 to 340, but in-patients fell from 129 to 113 owing to the heavy cost of keep due to the rise in the price of fodder. The daily average attendance was 14. This is a well-managed institution, showing only a small percentage (8) of results unknown. There were 5 cases of glanders, 4 of which were destroyed and 1 died after isolation. Receipts Rs. 1,745, expenditure Rs. 1,300, about half the income being contributed by the Society for Prevention of Cruelty to Animals.

*Cattle Disease.*

49. The year was tolerably healthy, foot and mouth disease occurring only in three districts—Kaira, Kolába and Násik. Small-pox was reported from Broach and rinderpest from Kaira, and an un-identified disease caused slight mortality in Poona. None of these outbreaks were serious, and special measures were not necessitated. Proposals for the more effective reporting of contagious horse and cattle disease have been submitted to Government.

*Bacteriological Laboratory.*

50. Doctor Lingard has continued his investigation into the Intimate Etiology of "Surra", and is submitting a detailed report to Government.

The Superintendent of Bacteriological Survey, recently included in the Civil Veterinary Department, has assisted Doctor Lingard in laboratory research, and has been engaged in preparing materials for his report on Indian Cattle. He also delivered a course of lectures on veterinary matters at the College of Sicence, Poona.

## VII.—AGRICULTURAL AND FISCAL STATISTICS.

### A.—AGRICULTURAL.

51. The modifications in the district Price return required to bring it into conformity with the revised Imperial return, as noticed in last report (paragraph 55)

have been submitted to Government. As regards agricultural stock, arrangements have been made with all Collectors for the registration of donkeys, mules and camels as now required. (Under the Manual they were registered only in districts where numerous). During the year under report a special return was submitted to Government showing the estimated outturn per acre of the principal crops of the Presidency. This return is apparently to be quinquennial. To the usual annual series the quinquennial return of water-supply, which is prescribed under the revised Manual, has also been added.

The District Agricultural Returns, due in this office on 1st September and 1st October respectively for the Presidency Proper and Sind, were received late in the case of the districts noted in the margin. In the Central and Southern Divisions, where the compilation of the Táluka and District Agricultural Returns is performed by the agricultural staff, there should be little difficulty in furnishing the returns by the prescribed date.

| District. | Date of receipt. |
|---|---|
| Kolába ... ... | 24th September. |
| Ratnágiri ... ... | 26th do. |
| Khándesh ... | 27th do. |
| Násik ... ... | Do. do. |
| Thána ... ... | Do. do. |
| Ahmadabad ... | 30th do. |
| Surat ... ... | Do. do. |
| Ahmadnagar ... | 5th October. |
| Sholápur ... ... | 6th do. |
| Belgaum ... ... | 10th do. |
| Kánara ... ... | Do. do. |
| Thar and Párkar ... | 17th do. |

Statistics for a large number of khoti and alienated villages in Ratnágiri have been again excluded as untrustworthy, though some of those previously excluded have been admitted after further enquiry.

**Return No. I.—Area of Available Statistics.**

52. The following table shows the variations in the total number of villages and gross area of the Presidency Proper and Sind, distingushing area and villages for which agricultural statistics are and are not available :—

*Area Details.*

| Province. | Gross Area and Villages. | | | Area and Villages of Statistics available. | | | Area and Villages of Statistics not available. | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1890-91. | 1891-92. | Variation. | 1890-91. | 1891-92. | Variation. | 1890-91. | 1891-92. | Variation. |
| *A.—Presidency Proper.* | | | | | | | | | |
| Number of villages ... | 22,981 | 22,986 | +5 | 20,608½ | 20,702 | +93½ | 2,372½ | 2,284 | —88½ |
| Area (thousand acres) ... | 47,546 | 47,602 | +56 | 43,851 | 44,038 | +187 | 3,695 | 3,564 | —131 |
| *B.—Sind.* | | | | | | | | | |
| Number of villages ... | 4,107 | 4,113 | +6 | 3,982 | 3,987 | +5 | 125 | 126 | +1 |
| Area (thousand acres) ... | 28,407 | 28,998 | +591 | 24,421 | 24,945 | +524 | 3,986 | 4,053 | +67 |
| *Total Presidency (A + B).* | | | | | | | | | |
| Number of villages ... | 27,088 | 27,099 | +11 | 24,590½ | 24,689 | +98½ | 2,497½ | 2,410 | —87½ |
| Area (thousand acres) ... | 75,953 | 76,600 | +647 | 68,272 | 68,983 | +711 | 7,681 | 7,617 | —64 |

53. Gross Area.—In the Presidency Proper, the gross area shows a net increase of 56,000 acres, the chief variations being in the districts noted in the margin, and attributable partly to corrections made in survey and partly to inclusion of estimated areas of unsurveyed villages hitherto omitted in the district returns.

| District. | Area. |
|---|---|
| | Acres. |
| Khándesh ... ... | +1,218 |
| Ahmadnagar ... .. | —1,715 |
| Poona ... ... ... | +6,859 |
| Belgaum ... ... ... | +36,802 |
| Ratnágiri... ... ... | +10,548 |

In the total number of villages there is an apparent increase of 5, one each in Sátára and Belgaum and 3 in Ratnágiri. In Sátára and Belgaum the increase is explained by the return of certain areas as new villages, and this is probably also the case in Ratnágiri, though not so stated in the returns.

In Sind the gross area shows a considerable increase, as noted in the margin. The large increase in Karáchi is attributed to the correction of wrong figures returned last year for Sháhbandar táluka; elsewhere it is due to the progress of survey and to the inclusion of river-side land hitherto unaccounted for.

| District. | Area. |
|---|---|
| | Acres. |
| Karáchi ... ... ... | +573,120 |
| Hyderabad ... ... | +2,256 |
| Shikárpur ... ... | +6,412 |
| Upper Sind Frontier ... | +9,958 |

54. Area of available statistics—In the Presidency Proper there is a net increase of 93½ in the number of villages and of 187,000 acres in area, the chief variations being in the districts noted in the margin. In Sátára the large decrease is accounted for by the transfer of 49 unsurveyed alienated villages, for which rough estimates were formerly accepted, to the head "Statistics not available". In Ratnágiri the increase is due to revised classification of villages for which statistics are returned. In Bijápur the increase is attributed to the return of statistics for one village of which the record was last year stolen. In other districts the increase is chiefly due to the transfer of surveyed villages from the head "Not available".

| District. | Villages. | Area. |
|---|---|---|
| | No. | Acres. |
| Kaira ... ... ... | +1 | +1,164 |
| Panch Mahále ... ... | +12½ | +29,091 |
| Khándesh ... ... ... | +3 | +2,164 |
| Násik ... ... ... | ... | +924 |
| Poona ... ... ... | ... | +6,859 |
| Sátára ... ... ... | −49 | −105,359 |
| Belgaum ... ... ... | ... | −3,777 |
| Bijápur ... ... ... | +1 | +7,445 |
| Thána ... ... ... | +23 | +25,518 |
| Ratnágiri ... ... ... | +102 | +221,978 |

| District. | Area. |
|---|---|
| | Acres. |
| Karáchi ... ... ... | +509,030 |
| Hyderabad ... ... | +2,256 |
| Upper Sind Frontier ... | +12,536 |

In Sind the increases noted are due to causes stated above under "Gross area".

Non-reporting villages—In the Presidency Proper 1,443½ Government villages with an area of 2,460,000 acres and 840½ alienated villages with an area of 1,104,000 acres do not return agricultural statistics. The alienated villages are all unsurveyed, and the Government villages are under special tenures. In Sind statistics are now furnished for all but 126 villages (121 Government and 5 alienated) with an area of 4,053,000 acres.

| District. | Non-reporting Government villages. |
|---|---|
| | No. |
| Kaira ... ... ... | 35 |
| Panch Mahále ... ... | 59 |
| Khándesh ... ... | 355½ |
| Násik ... ... ... | 12 |
| Sátára ... .. ... | 1 |
| Kolába ... ... ... | 3 |
| Ratnágiri... ... ... | 978 |

**Return No. II.—Cultivated and Uncultivated Area.**

55. The variations in areas under sub-heads of cultivated and uncultivated land, are shown in the appended table. For comparison with last year, the variations exhibited in this return and other returns are in this review shown for the Presidency Proper exclusive of Ratnágiri. For Ratnágiri and Sind no comparison can be made owing to sudden changes in areas of "available statistics" as noted under Return No. 1 :—

PRESIDENCY PROPER EXCLUSIVE OF RATNÁGIRI.

| Detail. | Area (Thousand Acres). | | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|
| | 1890-91. | 1891-92. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| *A.—Cultivated Area.* | | | | | | |
| 1. Gross cropped ... ... | 25,458 | 24,854 | ... | ... | 604 | 2·37 |
| 2. Cropped more than once ... | 540 | 424 | ... | ... | 116 | 21·48 |
| 3. Net area cropped ... ... | 24,918 | 24,430 | ... | ... | 488 | 1·96 |
| 4. Fallow ... ... ... | 4,608 | 5,173 | 565 | 12·26 | ... | ... |
| Total cultivated 3+4. 5. Assessed ... | 29,443 | 29,522 | 79 | 0·26 | ... | ... |
| Total cultivated 3+4. 6. Unassessed ... | 83 | 81 | ... | ... | 2 | 2·4 |
| Total cultivated 3+4. 7. Total A. ... | 29,526 | 29,603 | 77 | 0·26 | ... | ... |
| *B.—Uncultivated Area.* | | | | | | |
| Available for cultivation. 8. Assessed ... | 1,323 | 1,226 | ... | ... | 97 | 7·33 |
| Available for cultivation. 9. Unassessed ... | 863 | 835 | ... | ... | 28 | 3·24 |
| Not available for cultivation. 10. Forest ... | 6,678 | 6,750 | 72 | 1·1 | ... | ... |
| Not available for cultivation. 11. Other than forest ... ... | 5,088 | 5,029 | ... | ... | 59 | 1·16 |
| 12. Total B (uncultivated) ... | 13,952 | 13,840 | ... | ... | 112 | 0·80 |
| 13. Total A+B=Area of available statistics ... ... | 43,478 | 43,443 | ... | ... | 35 | 0·08 |

Cultivated area.

56. The gross cropped area shows a net decrease of 604,000 acres or 2·37 per cent., and the area cropped more than once a decrease of 116,000 acres, or 21·48 per cent. Thus the total net area cropped has decreased by 488,000 acres, or 1·96 per cent. The principal items of increase and decrease are noted in the margin. The large decrease in the net cropped area in the Karnátak is due to scanty and unseasonable rainfall. In Sátára the decrease is nominal, arising from the exclusion of 49 alienated villages as noted above in paragraph 54. The considerable increase in Ahmadabad and Khándesh is due to seasonable rainfall. In the Karnátak and Sátára, "current fallows" show a large increase attributable to the unfavourable season already referred to. In total assessed cultivated land, Kaira alone shows a small decrease, Sátára being excepted for reasons stated. The increase is considerable in Thána (35,000), Panch Maháls (31,000) and Khándesh (21,000).

| District. | Net cropped Area. | Current Fallows. | Assessed, cultivated, i. e., occupied Land. |
|---|---|---|---|
| | (Area in | thousand | acres.) |
| Ahmadabad ... ... ... | +34 | —34 | ..... |
| Kaira ... ... ... ... | —4 | +2 | —2 |
| Panch Maháls ... ... | +18 | +13 | +31 |
| Broach... ... ... ... | +4 | —1 | +3 |
| Surat .. ... ... ... | +3 | —2 | +1 |
| Khándesh ... ... ... | +44 | —23 | +21 |
| Násik ... ... ... ... | +31 | —19 | +12 |
| Ahmadnagar ... ... ... | +21 | —14 | +7 |
| Poona ... ... ... ... | +4 | +6 | +10 |
| Sholápur ... ... ... | +19 | —19 | ..... |
| Sátára... ... ... ... | —77 | +10 | —67 |
| Belgaum ... ... ... | —88 | +92 | +4 |
| Bijápur ... ... ... | —50 | +67 | +17 |
| Dhárwar .. ... ... | —444 | +445 | +1 |
| Thána... ... ... ... | ..... | +35 | +35 |
| Kolába... ... ... .. | —3 | +3 | ..... |
| Kánara... .. ... .. | —3 | +4 | +1 |

Uncultivated area.

57. There is a decrease of 97,000 acres, or 7·33 per cent., under "assessed" and of 28,000 acres, or 3·24 per cent., under "unassessed land available for cultivation". The decrease is especially noticeable in the Deccan and Karnátak, and is due partly to increased cultivation and partly to the extension of forests.

Forest.

58. Land under forest has increased by 72,000 acres, or 1·1 per cent., chiefly in the districts noted in the margin.

| District. | Thousand Acres. |
|---|---|
| Khándesh ... ... | +27 |
| Násik ... ... ... | +17 |
| Poona ... ... .. | +12 |
| Kolába ... ... | +9 |
| Thána... ... ... | +7 |

59. The usual percentage table summarizing the information contained in Returns Nos. I and II is appended :—

| No. | District. | Percentage on gross area, of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas: Cultivated. Actually cropped. | Cultivated. Current Fallows. | Uncultivated. Available for cultivation. | Uncultivated. Not available for cultivation. | Forest. |
|---|---|---|---|---|---|---|---|
| | A.—Presidency Proper. | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 1·0 | 57 | 20 | 4 | 18 | 1 |
| 2 | Kaira ... ... ... | 8·4 | 75 | 5 | 8 | 12 | ... |
| 3 | Panch Maháls ... ... | 12·7 | 37 | 16 | 20 | 9 | 18 |
| 4 | Broach ... ... ... | 1·9 | 65 | 6 | 3 | 26 | ... |
| 5 | Surat ... ... ... | 2·4 | 48 | 24 | 6 | 18 | 4 |
| | Average ... | 4·4 | 56 | 16 | 7 | 17 | 4 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 9·8 | 60 | 3 | 15 | 12 | 10 |
| 7 | Násik ... ... ... | 4·3 | 57 | 8 | 4 | 9 | 22 |
| 8 | Ahmadnagar ... ... | 2·5 | 67 | 8 | 3 | 9 | 13 |
| 9 | Poona ... ... ... | 1·2 | 63 | 11 | 0·5 | 12·5 | 13 |
| 10 | Sholápur ... ... | ... | 75 | 10 | 1 | 8 | 6 |
| 11 | Sátára ... ... ... | 7·2 | 60 | 14 | 1 | 10 | 15 |
| | Average ... | 4·7 | 63 | 8 | 5 | 10 | 14 |

| No. | District. | Percentage on gross area, of areas for which statistics are not available. | Percentage on net area for which statistics are available, of areas: Cultivated. Actually cropped. | Cultivated. Current Fallows. | Uncultivated. Available for cultivation. | Uncultivated. Not available for cultivation. | Forest. |
|---|---|---|---|---|---|---|---|
| | A.—Presidency Proper —*continued.* | | | | | | |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 2·4 | 59 | 15 | 4 | 6 | 16 |
| 13 | Bijápur ... ... ... | 0·7 | 75·5 | 11 | 3 | 5·5 | 5 |
| 14 | Dhárwár ... ... | 2·5 | 57 | 24 | 2 | 7 | 10 |
| | Average ... | 1·8 | 65 | 16 | 3 | 6 | 10 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 2·7 | 21 | 22 | 5 | 30 | 22 |
| 16 | Kolába ... ... ... | 3·3 | 30 | 24 | 4 | 21 | 21 |
| 17 | Ratnágiri ... ... | 76·3 | 31 | 35 | 1 | 31 | 2 |
| 18 | Kánara ... ... ... | ... | 9 | 4 | 2 | 8 | 77 |
| | Average ... | 23·3 | 19 | 16 | 4 | 20 | 41 |
| | Average A. ... | 7·5 | 56 | 12 | 5 | 12 | 15 |
| | B.—Sind. | | | | | | |
| 19 | Karáchi ... ... ... | 28·4 | 7 | 8 | 19 | 64 | 2 |
| 20 | Hyderabad ... ... | ... | 14 | 24 | 40 | 20 | 2 |
| 21 | Shikárpur ... ... | 17·7 | 18 | 17 | 40 | 18 | 7 |
| 22 | Upper Sind Frontier ... | 48·3 | 23 | 40 | 18 | 13 | 6 |
| 23 | Thar and Párkar ... | ... | 7 | 10 | 5 | 76 | 2 |
| | Average B. ... | 13·9 | 11 | 15 | 23 | 48 | 3 |
| | Average for the Presidency ... ... ... | 9·9 | 39 | 13 | 12 | 25 | 11 |

**Return No. III—Crops.**

60. The rainfall was generally unfavourable for sowing, and the total area under crops fell by 604,000 acres, or 2·37 per cent. The decrease is especially large in non-food crops, chiefly in cotton and oil-seeds, the area falling by 656,000 acres, or 13·09 per cent, while food-crops show a small increase (52,000 acres, or 0·25 per cent.). Among these bájri increased considerably; wheat, tur and gram exhibiting a conspicuous decline. The decrease was most marked in the distressed districts of the Karnátak, as will be seen from the detailed notice under the principal crops.

*Table to show effect of season on area sown.*

Presidency Proper excluding Ratnágiri.

| Crops. | Area (Thousand Acres). 1890-91. | 1891-92. | Increase. Thousand Acres. | Increase. Per cent. | Decrease. Thousand Acres. | Decrease. Per cent. |
|---|---|---|---|---|---|---|
| Jowári ... ... ... ... | 8,322 | 8,325 | 3 | 0·03 | ... | ... |
| Bájri ... ... ... ... | 4,449 | 4,837 | 388 | 8·72 | ... | ... |
| Paddy ... ... ... ... | 1,555 | 1,554 | ... | ... | 1 | 0·06 |
| Wheat ... ... ... ... | 1,913 | 1,738 | ... | ... | 175 | 9·14 |
| Others ... ... ... ... | 1,694 | 1,623 | ... | ... | 71 | 4·19 |
| Total, Cereals ... | 17,933 | 18,077 | 144 | 0·80 | ... | ... |

PRESIDENCY PROPER EXCLUDING RATNÁGIRI.

| Crops. | Area (Thousand Acres). | | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|
| | 1890-91. | 1891-92. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| Tur ... ... ... ... | 524 | 451 | ... | ... | 73 | 13·93 |
| Gram ... ... ... ... | 704 | 617 | ... | ... | 87 | 12·35 |
| Others ... ... ... ... | 1,058 | 1,109 | 51 | 4·82 | ... | ... |
| Total Pulses ... | 2,286 | 2,177 | ... | ... | 109 | 4·76 |
| Tobacco ... ... ... ... | 96 | 76 | ... | ... | 20 | 20·83 |
| Sugarcane ... ... ... | 63 | 75 | 12 | 19·04 | ... | ... |
| Oil-seeds ... ... ... ... | 1,581 | 1,500 | ... | ... | 81 | 5·12 |
| Cotton ... ... ... ... | 3,052 | 2,521 | ... | ... | 531 | 17·39 |
| Food Crops Total ... | 20,447 | 20,499 | 52 | 0·25 | ... | ... |
| Non-Food Crops Total ... | 5,011 | 4,355 | ... | ... | 656 | 13·09 |
| Total Crops ... | 25,458 | 24,854 | ... | ... | 604 | 2·37 |

| District. | Thousand Acres. | | |
|---|---|---|---|
| | Kharif. | Rabi. | Net variation. |
| Ahmadabad .. .. | +49 | .. | +49 |
| Bijápur .. .. .. | —100 | +387 | +287 |
| Belgaum .. .. .. | —5 | +25 | +20 |
| Khándesh ... .. .. | +12 | .. | +12 |
| Kaira .. .. .. | +19 | —1 | +18 |
| Surat .. .. .. | +19 | .. | +19 |
| Broach .. .. .. | +8 | +6 | +14 |
| Ahmadnagar .. .. | .. | —207 | —207 |
| Sátára .. .. .. | +5 | —68 | —63 |
| Poona .. .. .. | —53 | +7 | —46 |
| Sholápur .. .. .. | .. | —45 | —45 |
| Násik .. .. .. | —118 | +90 | —28 |
| Dhárwár .. .. .. | —4 | —23 | —27 |

**Jowári.**—Rabi jowári increased by 171,000 acres, or 3·05 per cent., a rise corresponding to the fall in kharif jowári of 168,000 acres, or 6·10 per cent. In Gujarát and Khándesh only, where jowári is exclusively a kharíf crop, the area under it shows an increase. The general decrease is counterbalanced by a general increase under bájri, as noted below.

| District. | Thousand Acres. |
|---|---|
| Ahmadnagar .. .. .. | +272 |
| Sholápur .. .. .. | +73 |
| Poona .. .. .. .. | +71 |
| Sátára .. .. .. .. | +38 |
| Násik .. .. .. .. | +28 |
| Kaira .. .. .. .. | +19 |
| Ahmadabad .. .. .. | —50 |
| Bijápur .. .. .. .. | —67 |

**Bájri.**—A purely kharíf crop; increased by 388,000 acres, or 8·72 per cent. The increase is especially large in the Deccan and Kaira, where the early rain was seasonable. The decrease in Ahmadabad and Bijápur is met by the corresponding increase in jowári noted above.

| District. | Thousand Acres. | District. | Thousand Acres. |
|---|---|---|---|
| Ahmadabad .. .. .. | +6 | Satara .. .. .. .. | —4 |
| Kaira .. .. .. .. | —10 | Bijápur .. .. .. | —2 |
| Panch Mahále .. .. | +5 | Dhárwár .. .. .. | —4 |
| Broach .. .. .. .. | +4 | Thána .. .. .. .. | +3 |
| Surat .. .. .. .. | +3 | Kolába .. .. .. . | +2 |
| Násik .. .. .. .. | —2 | Kánara .. .. .. .. | —2 |
| Poona .. ... .. .. | +1 | | |

**Paddy.**—There is a net decrease of about 1,000 acres, or 0·06 per cent. The district variations are small, and do not call for comment.

| District. | Thousand Acres. |
|---|---|
| Dhárwár .. .. .. | —144 |
| Belgaum .. .. .. | —31 |
| Ahmadnagar .. .. .. | —31 |
| Násik .. .. .. .. | —30 |
| Bijápur .. .. .. .. | —28 |
| Poona .. .. .. .. | —19 |
| Sátára .. .. .. .. | —9 |
| Khándesh .. .. .. | +53 |
| Broach .. .. .. .. | +39 |
| Ahmadabad .. .. .. | +16 |

**Wheat.**—A rabi crop largely grown all over the Presidency except in the Konkan; shows a net decrease of 175,000 acres, or 9·14 per cent. The increase in Khándesh and Gujarát is noticeable. The decrease in the Deccan and Karnátak districts, especially large in Dhárwár, is attributable to the failure of the late rains.

**Other Cereals.**—The minor cereals show a net decrease of 71,000 acres, or 4·19 per cent. Kodra, ragi and vari are grown, more or less, all over the Presidency. Rala is practically confined to the Karnátak and South Deccan, and being mainly a kharif crop, sown with the first showers, its area diminished owing to the lateness of the monsoon. Maize is a staple crop in the Panch Maháls, taking the place of jowári and bájri in other districts.

| | Thousand Acres. |
|---|---|
| Kodra .. .. .. .. | —24 |
| Ragi .. .. .. .. | —16 |
| Vari .. .. .. .. | +2 |
| Rala .. .. .. .. | —35 |
| Maize .. .. .. .. | +3 |
| Barley .. .. .. .. | +1 |

Its area in this district increased by 7,000 acres, or 7·9 per cent. Barley with a total area of 32,000 acres, the same as last year, is chiefly grown in North Gujarát and in the South Deccan.

| District. | Thousand Acres. |
|---|---|
| *Tur.* | |
| Bijápur .. .. .. .. | —27 |
| Sholápur .. .. .. .. | —10 |
| Sátára .. .. .. .. | —8 |
| Kaira .. .. .. .. | —7 |
| Khándesh .. .. .. | —6 |
| *Gram.* | |
| Poona .. .. .. .. | —39 |
| Belgaum .. .. .. .. | —17 |
| Sátára .. .. .. .. | —13 |
| Násik .. .. .. .. | —11 |
| Dhárwár .. .. .. .. | —10 |
| Ahmadnagar .. .. .. | —6 |
| Bijápur .. .. .. .. | —6 |

**Pulses.**—There is a net decrease of 109,000 acres, or 4·76 per cent., chiefly under tur (73,000 acres, or 13·93 per cent.) and gram (87,000 acres, or 12·35 per cent.), other pulses having increased by 51,000 acres, or 4·82 per cent. The sowing rain was generally unfavourable for tur and gram, the chief pulses grown.

| District. | Acres. |
|---|---|
| Ahmadabad .. .. .. | —1,400 |
| Kaira .. .. .. .. | —900 |
| Násik .. .. .. .. | —1,400 |
| Ahmadnagar .. .. .. | —4,500 |
| Sátára .. .. .. .. | —2,500 |
| Belgaum .. .. .. .. | —5,800 |
| Bijápur .. .. .. .. | —1,600 |
| Dhárwár .. .. .. .. | —1,200 |

**Tobacco.**—This crop was grown over considerably extended areas in the two previous years (+21,000 acres in 1889-90 and +26,000 acres in 1890-91), but with capricious and scanty rainfall has fallen off by 20,000 acres, or 20·83 per cent.

| District. | Acres. |
|---|---|
| Ahmadabad .. .. .. | +1,000 |
| Kaira .. .. .. .. | +400 |
| Surat .. .. .. .. | +800 |
| Khándesh .. .. .. | +400 |
| Násik .. .. .. .. | +2,100 |
| Ahmadnagar .. .. .. | +500 |
| Poona .. .. .. .. | +3,000 |
| Sholápur .. .. .. .. | +700 |
| Dhárwár .. .. .. .. | +1,800 |

**Sugarcane.**—As noted in last year's report the sugarcane area declined during the past two years, and prices rose in consequence. This year there is an increase of 12,000 acres, or 19·04 per cent., which is probably due partly to high prices and partly to the ordinary rotation of crops.

| | Thousand Acres. |
|---|---|
| Sesame .. .. .. .. | +11 |
| Linseed .. .. .. .. | +39 |
| Castor .. .. .. .. | —22 |
| Safflower .. .. .. .. | —71 |
| Niger .. .. .. .. | —56 |
| Ground-nut .. .. .. | +7 |
| Others .. .. .. .. | +11 |

**Oil-seeds.**—A net decrease of 81,000 acres, or 5·12 per cent., as noted in the margin. Of these sesame is grown all over the Presidency, while linseed, niger-seed, ground-nut and safflower are grown chiefly in the Deccan and Karnátak. Castor is largely produced in Gujarát and in the Karnátak and Sholápur. Special forecasts are reported for sesame and linseed only of the seeds named.

**Sesame.**—There is a net increase of 11,000, or 4·8 per cent., mainly in Gujarát, in the Konkan and North Deccan; the Karnátak and South Deccan exhibiting a considerable decrease owing to short sowing rain.

**Linseed.**—The net increase of 39,000 acres, or 18·7 per cent., is chiefly in the North Deccan (Khándesh 25,000 acres and Násik 12,000 acres), where the sowing rain was favourable. In Khándesh the increase is also partly due to substitution of linseed for cotton damaged and ploughed up. The South Deccan and Karnátak show a considerable decrease owing to the unfavourable rainfall.

| District. | Thousand Acres. |
|---|---|
| Dhárwár .. .. .. | —195 |
| Bijápur .. .. .. .. | —149 |
| Broach .. .. .. .. | —63 |
| Khándesh .. .. .. | —51 |
| Belgaum .. .. .. .. | —37 |
| Ahmadnagar .. .. .. | —28 |
| Surat .. .. .. .. | —13 |
| Ahmedabad .. .. .. | —11 |
| Násik .. .. .. .. | +16 |

**Cotton.**—Under this head there is a net decrease of 531,000 acres, or 17·39 per cent. The decrease is general, except in Násik, and is especially large in the famine districts of the Karnátak. In Gujarát the decrease is attributable to excessive rain, and in the Deccan to unseasonable rain for sowing and to the low prices of the previous year.

**Potato.**—The acreage in the Presidency Proper increased from 7,800 acres to 9,800 acres, or 25·6 per cent., the increase being considerable in Poona (1,308 acres), Ahmadnagar (289), Sátára (239) and Násik (135). This may be due to the rise in prices which has followed the increasing spread of disease.

**Green Fodder.**—Lucerne shows a decrease from 1,440 to 1,076 acres; the crop is chiefly cultivated in Ahmadnagar (518 acres), Poona (444), Násik (73), and Thána (33). Hot-weather jowári, the only cereal cultivated for fodder, increased from 16,000 to 18,500 acres. The increase is especially large in Bijápur, the cultivation being extended from 194 to 1,082 acres, in order to supply the deficiency of ordinary fodder.

61. **Kharif and Rabi Crops.**—The details given in the appended table show variations under kharif and rabi cereals and pulses :—

(*Figures in thousand acres.*)

| Year. | Kharif. | | Rabi. | |
|---|---|---|---|---|
| | Cereals. | Pulses. | Cereals. | Pulses. |
| 1890-91 ... ... | 10,373 | 1,394 | 7,559 | 892 |
| 1891-92 ... ... | 10,664 | 1,403 | 7,569 | 792 |
| | +291 | +9 | +10 | −100 |

The fall in rabi pulses is owing to the deficiency of late rain.

62. The usual two returns showing the distribution of crops are appended. Statement A shows the distribution of the principal crops in each district, including Sind. Statement B shows the proportion which the area under the several crops in each district holds with respect to the gross area in the Presidency Proper.

*A.—Distribution of Crops—Percentages shown on District Areas.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowari. | Bajri. | Paddy. | Wheat. | Coarse Grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | **A.—Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 25 | 14 | 5 | 12 | 4 | 2 | 62 | 7 | 1 | 25 | 4 | 1 | 70 | 30 |
| 2 | Kaira ... ... ... | 10 | 34 | 13 | 2 | 21 | 1 | 81 | 11 | 1 | 1 | 2 | 4 | 93 | 7 |
| 3 | Panch Mahals ... ... ... | 1 | 13 | 14 | 4 | 13 | 25 | 70 | 19 | ... | ... | 9 | 2 | 89 | 11 |
| 4 | Broach ... ... ... ... | 18 | 3 | 3 | 15 | 1 | ... | 40 | 11 | 5 | 41 | 2 | 1 | 56 | 44 |
| 5 | Surat ... ... ... ... | 22 | 1 | 20 | 7 | 10 | ... | 60 | 13 | 2 | 18 | 6 | 1 | 75 | 25 |
| | Average ... | 18 | 14 | 9 | 9 | 9 | 4 | 63 | 11 | 1 | 20 | 4 | 1 | 75 | 25 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 17 | 23 | 1 | 9 | 1 | ... | 51 | 7 | ... | 36 | 5 | 1 | 58 | 42 |
| 7 | Násik ... ... ... ... | 5 | 40 | 3 | 16 | 10 | ... | 74 | 10 | 1 | 3 | 11 | 1 | 85 | 15 |
| 8 | Ahmadnagar ... ... ... | 37 | 35 | 1 | 9 | 2 | ... | 84 | 8 | ... | 1 | 6 | 1 | 92 | 8 |
| 9 | Poona ... ... ... ... | 38 | 34 | 3 | 4 | 5 | 1 | 85 | 6 | 1 | ... | 7 | 1 | 92 | 8 |
| 10 | Sholápur ... ... ... | 67 | 9 | 1 | 2 | ... | 1 | 80 | 7 | ... | ... | 12 | 1 | 87 | 13 |
| 11 | Sátára ... ... ... ... | 30 | 32 | 2 | 3 | 7 | 1 | 75 | 16 | 1 | 1 | 5 | 2 | 92 | 8 |
| | Average ... | 32 | 29 | 1 | 7 | 4 | 1 | 74 | 8 | 1 | 9 | 7 | 1 | 83 | 17 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 45 | 9 | 7 | 5 | 9 | ... | 75 | 11 | 1 | 6 | 4 | 3 | 87 | 13 |
| 13 | Bijápur ... ... ... ... | 66 | 6 | ... | 5 | 2 | ... | 79 | 5 | ... | 9 | 6 | 1 | 84 | 16 |
| 14 | Dhárwár ... ... ... | 36 | ... | 9 | 9 | 9 | ... | 63 | 12 | 1 | 17 | 3 | 4 | 76 | 24 |
| | Average ... | 52 | 5 | 5 | 6 | 6 | ... | 74 | 8 | 1 | 10 | 5 | 2 | 83 | 17 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 64 | ... | 22 | ... | 86 | 7 | 2 | ... | 3 | 2 | 95 | 5 |
| 16 | Kolába ... ... ... ... | ... | ... | 59 | ... | 32 | ... | 91 | 6 | 1 | ... | 2 | ... | 98 | 2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 32 | ... | 48 | ... | 80 | 9 | 4 | ... | 5 | 2 | 93 | 7 |
| 18 | Kánara ... ... ... ... | ... | ... | 78 | ... | 3 | ... | 81 | 3 | 10 | ... | ... | 6 | 94 | 6 |
| | Average ... | ... | ... | 61 | ... | 25 | ... | 86 | 6 | 3 | ... | 3 | 2 | 95 | 5 |
| | Average, A. | 33 | 19 | 7 | 7 | 6 | 1 | 73 | 9 | 1 | 10 | 6 | 1 | 83 | 17 |
| | *B.—Sind.* | | | | | | | | | | | | | | |
| 19 | Karachi ... ... ... .. | 16 | 6 | 42 | 14 | ... | 3 | 81 | 8 | 2 | ... | 7 | 2 | 91 | 9 |
| 20 | Hyderabad ... ... ... | 13 | 33 | 20 | 7 | ... | 1 | 74 | 3 | 3 | 8 | 10 | 2 | 80 | 20 |
| 21 | Shikárpur ... ... ... | 20 | 1 | 27 | 26 | ... | ... | 74 | 14 | 1 | 1 | 9 | 1 | 89 | 11 |
| 22 | Upper Sind Frontier... ... | 32 | 5 | 5 | 13 | ... | ... | 55 | 7 | 1 | 1 | 36 | ... | 63 | 37 |
| 23 | Thar and Parkar ... ... | 1 | 69 | 15 | 6 | ... | ... | 91 | 1 | ... | 4 | 4 | ... | 92 | 8 |
| | Average, B. ... | 15 | 24 | 23 | 14 | ... | 1 | 77 | 6 | 2 | 4 | 10 | 1 | 85 | 15 |
| | Average for the Presidency. | 31 | 20 | 8 | 8 | 5 | 1 | 73 | 9 | 1 | 9 | 7 | 1 | 83 | 17 |

## *B.—Distribution of Crops—Percentages shown on Presidency Area.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse Grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. | 4·2 | 4·1 | 4·2 | 9·8 | 3·7 | 10·0 | 4·8 | 4·7 | 4·0 | 14·0 | 3·3 | 2·7 | 4·8 | 9·5 |
| 2 | Kaira .. .. .. .. | 0·9 | 5·0 | 5·9 | 0·1 | 9·8 | 2·9 | 3·2 | 3·6 | 3·1 | 0·4 | 1·0 | 7·8 | 3·2 | 1·2 |
| 3 | Panch Maháls.. .. .. | 0·1 | 1·0 | 3·4 | 0·8 | 3·5 | 47·6 | 1·5 | 3·4 | 0·5 | .. | 2·4 | 2·3 | 1·7 | 1·0 |
| 4 | Broach .. .. .. .. | 1·3 | 0·3 | 1·2 | 5·3 | 0·5 | ... | 1·3 | 2·9 | 12·5 | 9·8 | 1·0 | 1·3 | 1·6 | 6·1 |
| 5 | Surat .. .. .. .. | 1·4 | 0·2 | 6·6 | 2·1 | 3·4 | 0·4 | 1·7 | 3·2 | 3·4 | 3·8 | 2·2 | 1·4 | 1·9 | 3·0 |
| | Total .. | 7·9 | 10·6 | 21·3 | 18·7 | 20·9 | 60·9 | 12·5 | 17·8 | 23·5 | 28·0 | 9·9 | 15·5 | 13·2 | 20·8 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. | 6·4 | 14·7 | 1·6 | 15·2 | 1·8 | 2·9 | 8·7 | 9·2 | 4·5 | 43·5 | 9·4 | 10·9 | 8·6 | 29·2 |
| 7 | Násik .. .. .. .. | 1·3 | 17·2 | 8·2 | 18·3 | 13·9 | 2·5 | 8·3 | 9·5 | 8·0 | 2·0 | 15·5 | 3·3 | 8·5 | 6·8 |
| 8 | Ahmadnagar .. .. .. | 12·4 | 20·2 | 0·7 | 14·6 | 2·8 | 3·4 | 12·8 | 10·4 | 4·3 | 1·5 | 10·9 | 5·7 | 12·4 | 5·0 |
| 9 | Poona ... .. .. | 9·9 | 14·8 | 4·1 | 5·3 | 6·9 | 6·6 | 9·9 | 6·3 | 11·9 | .. | 9·7 | 5·0 | 9·5 | 3·7 |
| 10 | Sholápur .. .. .. | 17·7 | 3·9 | 1·0 | 3·2 | 0·1 | 10·0 | 9·6 | 6·7 | 4·2 | 0·1 | 16·8 | 8·0 | 9·3 | 6·5 |
| 11 | Sátára .. .. .. .. | 6·5 | 12·0 | 2·3 | 3·1 | 8·9 | 9·4 | 7·5 | 12·9 | 9·3 | 0·3 | 6·5 | 10·8 | 8·1 | 3·3 |
| | Total .. | 54·2 | 82·8 | 12·9 | 59·7 | 34·4 | 34·8 | 56·8 | 55·0 | 42·2 | 47·4 | 68·8 | 43·7 | 56·4 | 54·5 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. | 9·2 | 3·0 | 6·9 | 4·8 | 10·1 | 3·4 | 7·0 | 8·3 | 8·0 | 4·2 | 3·9 | 13·3 | 7·1 | 4·8 |
| 13 | Bijápur .. .. .. | 21·6 | 3·5 | 0·3 | 8·3 | 2·5 | 0·8 | 11·8 | 6·4 | 3·2 | 9·4 | 11·3 | 2·9 | 11·1 | 9·6 |
| 14 | Dhárwár .. .. .. | 7·1 | 0·1 | 9·3 | 8·5 | 9·9 | 0·1 | 5·7 | 8·7 | 6·2 | 11·0 | 3·7 | 16·6 | 6·1 | 8·9 |
| | Total .. | 37·9 | 6·6 | 16·5 | 21·6 | 22·5 | 4·3 | 24·5 | 23·4 | 17·4 | 24·6 | 18·9 | 32·8 | 24·3 | 23·3 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. | .. | .. | 18·8 | .. | 7·0 | .. | 2·2 | 1·6 | 2·7 | .. | 1·1 | 2·2 | 2·2 | 0·5 |
| 16 | Kolába .. .. .. .. | .. | .. | 14·6 | .. | 8·6 | .. | 2·0 | 1·1 | 1·2 | .. | 0·5 | 0·4 | 1·9 | 0·2 |
| 17 | Ratnágiri .. .. .. | .. | .. | 3·9 | .. | 6·2 | .. | 0·9 | 0·8 | 3·2 | .. | 0·7 | 0·8 | 0·9 | 0·3 |
| 18 | Kánára .. .. .. | .. | .. | 12·0 | .. | 0·4 | .. | 1·1 | 0·3 | 9·8 | .. | 0·1 | 4·6 | 1·1 | 0·4 |
| | Total .. | .. | .. | 49·3 | .. | 22·2 | ... | 6·2 | 3·8 | 16·9 | .. | 2·4 | 8·0 | 6·1 | 1·4 |
| | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

63. **Outturn of Crops.**—The following table gives the anna valuation of the outturn of principal crops in each district. The valuation (by Mámlatdárs) purports to conform to the prescribed standard, *i.e.* 16 annas represent an average crop. The table must, however, be taken as representing a merely approximate estimate.

*Approximate Anna Valuation of Principal Crops in each District, 1891-92.*

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Ragi. | Vari. | Tur. | Gram. | Cotton. |
| | *I.—Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... ... | 12 | 10 | 11 | 10 | 5 | 8 | 9 | 8 | 6 | 9 |
| 2 | Kaira ... ... ... ... | 14 | 12 | 9 | 12 | 11 | 12 | 4 | 9 | 7 | 10 |
| 3 | Panch Maháls ... ... ... | Maize 12 | 10 | 9 | 12 | 11 | 10 | 10 | 12 | 12 | 10 |
| 4 | Broach ... ... ... ... ... | 11 | 14 | 11 | 15 | 15 | ... | ... | 9 | 12 | 16 |
| 5 | Surat ... ... ... ... ... | 12 | 9 | 13 | 14 | 11 | 11 | 5 | 10 | 9 | 13 |
| | *II.—Deccán.* | | | | | | | | | | |
| 6 | Khándesh ... ... ... ... | 15 | 13 | 14 | 15 | 14 | 12 | ... | 13 | 10 | 13 |
| 7 | Násik .. ... ... ... ... | 10 | 14 | 10 | 11 | ... | 12 | 11 | 12 | 9 | 12 |
| 8 | Ahmadnagar ... ... ... ... | 8 | 9 | 9 | 8 | 9 | 10 | 10 | 9 | 8 | 6 |
| 9 | Poona ... ... ... ... ... | 8 | 6 | 8 | 7 | 8 | 9 | 7 | 4 | 6 | 6 |
| 10 | Sholápur ... ... ... ... | 8 | 2 | 6 | 9 | 1 | 2 | 4 | 7 | 8 | 6 |
| 11 | Sátára ... ... ... ... ... | 8 | 6 | 7 | 6 | 4 | 8 | 8 | 5 | 6 | 5 |
| | *III.—Karnátak.* | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 6 | 4 | 9 | 4 | 8 | 10 | 8 | 5 | 4 | 5 |
| 13 | Bijápur ... ... ... ... | 3 | 2 | 1 | 2 | ... | ... | 2 | 1 | 1 | 2 |
| 14 | Dhárwár ... ... ... ... | 5 | 4 | 7 | 2 | 8 | 7 | 5 | 3 | 2 | 3 |

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Ragi. | Vari. | Tur. | Gram. | Cotton. |
| | *IV.—Konkan.* | | | | | | | | | | |
| 15 | Thána ... ... ... ... ... | ... | ... | 15 | ... | 16 | 13 | 13 | 12 | 12 | ... |
| 16 | Kolába ... ... ... ... ... | ... | ... | 12 | ... | 8 | 10 | 10 | 9 | 13 | ... |
| 17 | Ratnágiri ... ... ... ... | ... | ... | 12 | ... | 7 | 9 | 10 | 6 | 6 | ... |
| 18 | Kánara ... ... ... ... ... | ... | ... | 14 | ... | ... | 15 | 12 | 12 | 14 | ... |
| | *Sind.* | | | | | | | | | | |
| 19 | Karáchi .. ... ... ... ... | 13 | 11 | 13 | 12 | ... | 11 | 9 | ... | 4 | 7 |
| 20 | Hyderabad ... ... ... ... | 13 | 12 | 14 | 11 | ... | ... | ... | ... | 9 | 9 |
| 21 | Shikárpur ... ... ... ... | 14 | 13 | 16 | 11 | ... | ... | ... | ... | 12 | 12 |
| 22 | Upper Sind Frontier... ... .. | 8 | 6 | 13 | 9 | ... | 8 | ... | ... | 9 | 9 |
| 23 | Thar and Párkar ... ... ... | | | | | Not re | turned | | | | |

*Note.—In the above table the valuations are calculated on the standard by which 16 annas represent an average crop.

The outturn all round was very poor in the famine affected districts of the Karnátak and in the South Deccan owing to failure of late rain. In the Konkan, Gujarát and Khándesh, the crops yielded a fair average return. Cotton, wheat, millets and rice all did well.

64. **Fruit-trees.**—Some increase is reported in mango, tamarind, jack and cocoanut, and a slight decrease in date and toddy palms. This enumeration of trees is, however, as previously reported, not worth much at present. Their distribution in the several provinces is noted below (trees in forest and village sites not being included) :—

FRUIT-TREES (EXCLUSIVE OF RATNÁGIRI).

*(Figures in thousands.)*

| No. | Province. | | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|---|
| 1 | Gujarát ... ... | | 517 | 118 | 4 | 7 | 236 | 620 |
| 2 | Deccan ... ... | | 711 | 58 | 10 | 7 | 9 | 93 |
| 3 | Karnátak ... ... | | 366 | 106 | 19 | 71 | ... | 992 |
| 4 | Konkan ... ... | | 536 | 36 | 160 | 1,434 | 89 | 12 |
| | Total for the Presidency Proper. | 1891-92 | 2,130 | 318 | 193 | 1,519 | 334 | 1,717 |
| | | 1890-91 | 1,961 | 306 | 120 | 1,261 | 336 | 1,736 |
| | | | +169 | +12 | —73 | +258 | —2 | —19 |
| 5 | Sind ... ... ... | | 198 | ... | ... | 1 | ... | 154 |
| | Grand Total, 1891-92. | | 2,328 | 318 | 193 | 1,520 | 334 | 1,871 |

Fruit-trees of special local importance are shown in the subjoined table so far as enumeration has yet been effected :—

| Trees and Districts. | Number. | Trees and Districts. | Number. |
|---|---|---|---|
| 1.—*Moha* (*Bassia latifolia*). | | 2.—*Betel-nut* (*Areca catechu*). | |
| Kaira ... ... ... ... | 135,000 | Kánara ... ... ... | 7,590,000 |
| Panch Maháls... ... ... | 91,000 | Thána... ... ... ... | 5,000 |
| Khándesh ... ... ... | 55,000 | Kolába ... ... ... | 2,500 |
| Násik ... ... ... ... | 3,100 | | |
| Broach... ... ... ... | 1,600 | | |

| Trees and Districts. | Number. | Trees and Districts. | Number. |
|---|---|---|---|
| 3.—*Ráyan (Mimusops Indica).* | | *Fig (Ficus carica).* | |
| Kaira ... ... ... ... | 70,400 | Poona ... ... ... ... | 43,000 |
| Ahmadabad ... ... ... | 9,100 | Násik ... ... ... ... | 3,100 |
| Panch Maháls... ... ... | 3,900 | Ahmadnagar ... ... ... | 1,900 |
| Broach... ... ... ... | 2,400 | Shikárpur ... ... ... | 900 |
| | | Belgaum ... ... ... | 700 |
| 4.—*Keshew-nut (Anacardium occidentale).* | | Hyderabad ... ... ... | 580 |
| Kánara... ... ... ... | 98,000 | 7.—*Vine (Vitis vinifera).* | |
| Thána ... ... ... ... | 5,200 | | |
| Belgaum ... ... ... | 1,500 | | |
| | | Násik ... ... ... ... | 36,500 |
| | | Poona ... ... ... ... | 35,100 |
| 5.—*Hirda (Terminalia chebula).* | | Shikárpur ... ... ... | 23,700 |
| | | Ahmadnagar ... ... ... | 14,300 |
| | | Khándesh ... ... ... | 1,400 |
| Ahmadnagar ... ... ... | 7,800 | Karáchi ... ... ... | 1,400 |

**Return No. IV.—Irrigation.**

65. The net irrigated area now amounts to 3·23 per cent. of the net cropped area in the Presidency Proper and 87·31 per cent. in Sind, as against 3·13 and 86·79 last year.

The variations under the principal sub-heads are shown below :—

*Irrigated Area.*

| No. | Detail. | Presidency Proper exclusive of Ratnágiri. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Thousand Acres. | | Increase. | | Decrease. | |
| | | 1890-91. | 1891-92. | Thousand Acres. | Per cent. | Thousand Acres. | Per cent. |
| | *A.—Area Irrigated.* | | | | | | |
| 1 | Irrigated from canals ... | 111 | 131 | 20 | 18·01 | ... | ... |
| 2 | Do. from tanks, wells, &c... | 669 | 659 | ... | ... | 10 | 1·50 |
| 3 | Total Area irrigated ... | 780 | 790 | 10 | 1·28 | ... | ... |
| | *B.—Crops Irrigated.* | | | | | | |
| 4 | Rice ... ... ... | 162 | 152 | ... | ... | 10 | 6·17 |
| 5 | Wheat ... ... ... | 177 | 153 | ... | ... | 24 | 13·5 |
| 6 | Sugarcane ... ... | 61 | 74 | 13 | 21·31 | ... | ... |
| 7 | Other crops ... ... | 482 | 496 | 14 | 2·90 | ... | ... |
| 8 | Total Crops irrigated ... | 882 | 875 | ... | ... | 7 | 0·79 |

*Note.*—The difference between columns 3 and 8 is due to the inclusion in column 8 of the area cropped with irrigation more than once.

| District. | Canals. | Tanks and wells. | Net variations. |
|---|---|---|---|
| | Acres. | Acres. | Acres. |
| Ahmadabad ... ... | —600 | —3,100 | —3,700 |
| Kaira ... ... ... | —1,000 | —900 | —1,900 |
| Panch Mahals ... ... | ... | +200 | +200 |
| Surat ... ... ... | ... | +600 | +600 |
| Khandesh ... ... | +500 | +3,600 | +4,100 |
| Násik ... ... ... | —300 | +6,300 | +6,000 |
| Ahmadnagar ... ... | —1,000 | +2,200 | +1,200 |
| Poona ... ... ... | +18,100 | —11,600 | +6,500 |
| Sholápur ... ... ... | +2,700 | +4,700 | +7,400 |
| Sátára ... ... ... | +100 | —3,800 | —3,700 |
| Belgaum ... ... ... | +2,000 | ... | +2,000 |
| Bijapur ... ... ... | —100 | +2,500 | +2,400 |
| Dharwar ... ... ... | +100 | —9,600 | —9,500 |
| Thána ... ... ... | ... | —400 | —400 |
| Kánara ... ... ... | ... | —100 | —100 |

The chief variations in the areas irrigated from various sources are noted in the margin. The increase under canal irrigation in Poona is partly counterbalanced by the concomitant decrease under tanks and wells. In Sholápur, on the other hand, both canal and tank and well irrigation have increased. Irrigation in the Presidency varies a good deal with the seasonableness or otherwise of the rainfall of the year, and from other causes is apt to appear capricious.

Among irrigated crops, wheat shows a decrease of 24,000 acres, chiefly in Ahmadabad and the Deccan (except Khándesh), and rice a decrease of 10,000 acres, chiefly in Dhárwár. The increase of 13,000 acres under sugarcane is general.

**Return No. V.—Agricultural Stock.**

66. Owing to scarcity of fodder, especially in the Karnátak and Deccan, cattle show a general decrease under all heads, the total net decrease reported being 342,000, or 4·2 per cent. The shrinkage is especially large under milch cattle and young stock. It must, however, be remembered that large numbers of these emigrated in search of fodder to return later on; and also that the enumeration of stock is still defective.

*Agricultural Stock.*

| Detail. | Presidency Proper exclusive of Ratnágiri. | | | | | |
|---|---|---|---|---|---|---|
| | Number in Thousands. | | Increase. | | Decrease. | |
| | 1890-91. | 1891-92. | Thousands. | Per cent. | Thousands. | Per cent. |
| 1. Plough cattle ... ... | 3,138 | 3,086 | ... | ... | 52 | 1·6 |
| 2. Breeding bulls ... ... | 22 | 20 | ... | ... | 2 | 9·0 |
| 3. Cattle for other purposes ... | 148 | 132 | ... | ... | 16 | 10·8 |
| 4. Milch cattle ... ... | 2,785 | 2,658 | ... | ... | 127 | 4·6 |
| 5. Young stock ... ... | 2,094 | 1,949 | ... | ... | 145 | 6·9 |
| 6. Total cattle (columns 1—5) ... | 8,187 | 7,845 | ... | ... | 342 | 4·2 |
| 7. Horses and ponies ... | 140 | 135 | ... | ... | 5 | 3·5 |
| 8. Sheep ... ... | 1,995 | 1,929 | ... | ... | 66 | 3·3 |
| 9. Goats ... ... | 1,278 | 1,374 | 98 | 7·6 | ... | ... |
| 10. Ploughs ... ... | 1,055 | 1,057 | 2 | 0·19 | ... | ... |
| 11. Carts ... ... | 483 | 487 | 5 | 1·04 | ... | ... |

67. The district variations under the principal heads are noted below :—

| No. | District. | Plough Oxen. | Cows. | She-Buffaloes. | Young Stock. | Total Cattle. | Sheep. | Goats. |
|---|---|---|---|---|---|---|---|---|
| 1 | Ahmadabád ... ... ... | +2,529 | —128 | —1,303 | —1,069 | —1,795 | +4,236 | —627 |
| 2 | Kaira ... ... ... | +2,740 | —565 | +2,701 | +10,090 | +14,661 | +474 | +4,509 |
| 3 | Panch Mahále ... ... | +9,562 | +645 | —151 | +339 | +11,631 | +169 | +3,011 |
| 4 | Broach ... ... ... | +312 | +981 | +153 | +6,009 | +7,540 | —2,158 | —1,435 |
| 5 | Surat... ... ... ... | +586 | —398 | +369 | —805 | —1,454 | +1,246 | +179 |
| 6 | Khándesh ... ... ... | +3,117 | —806 | +2,618 | —6,975 | —3,470 | —169 | +6,256 |
| 7 | Násik ... ... ... | +1,070 | —896 | +1,253 | +2,980 | +3,062 | +5,230 | +12,076 |
| 8 | Ahmadnagar ... ... | +620 | —465 | —1,592 | —2,703 | —7,099 | +10,839 | +22,320 |
| 9 | Poona ... ... ... | —11,827 | —14,386 | —3,424 | —6,708 | —38,618 | —4,088 | +7,916 |
| 10 | Sholápur ... ... ... | +1,149 | —6,035 | —2,689 | —3,393 | —14,574 | —6,352 | +24,262 |
| 11 | Sátára ... ... ... | —13,851 | —9,513 | —3,820 | —15,201 | —46,910 | —31,236 | +2,720 |
| 12 | Belgaum ... ... ... | —23 | —11,244 | —2,005 | —17,028 | —38,163 | —14,650 | +2,833 |
| 13 | Bijápur ... ... .. | —26,368 | —43,569 | —9,637 | —55,143 | —143,397 | —25,635 | +9,714 |
| 14 | Dhárwár ... ... ... | —10,825 | —15,557 | —7,020 | —41,232 | —78,857 | —5,032 | +3,148 |
| 15 | Thána ... ... ... | +877 | —4,124 | +360 | —10,125 | —12,871 | +589 | —547 |
| 16 | Kolába ... ... ... | +1,166 | —3,342 | +664 | —5,278 | —7,864 | +140 | +621 |
| 17 | Kánara ... ... ... | +4,532 | +4,219 | +2,440 | +837 | +15,935 | +137 | +1,197 |

**Cattle.**—Only 5 out of 17 districts show an increase in total cattle; the decrease being largest in the affected districts of the Karnátak and South Deccan. The increase in Kánara is attributable partly to the influx of cattle from the Karnátak for grazing. In Surat the decrease is probably due to defective returns from Surat City; in Khándesh to the removal of Berár cattle brought in last year to graze; and in Sátára it is partly accounted for by the exclusion of 49 villages as noted above under Return No. I.

**Sheep and Goats.**—Sheep exhibit a decrease of 66,000, or 3·3 per cent., and goats an increase of 98,000, or 7·6 per cent. The decrease in sheep is especially large in the affected districts of the Deccan and Karnátak, but it is curious that even in these districts goats have considerably increased. Defective registration notwithstanding this seems to point to the well-understood greater endurance of goats in times of scarcity.

**Horses and Ponies.**—These have, like other stock, decreased by about 5,000, or 3·5 per cent., especially in the Deccan and Karnátak (Bijapur 2,400, Ahmadnagar 1,800, Poona 1,600, Sátára 1,100, and Belgaum and Dhárwár, each 800); while Khándesh and Násik show an increase of 1,700 and 700 respectively. In Ahmadnagar half of the reported decrease occurs in one táluka (Nevása), and has on enquiry been found to be unreal, being due to wrong entries of the previous year. In Sátára the decrease is partly due to the exclusion of statistics of 49 villages, as already noted.

**Return No. VI.—Water-supply.**

68. This is a new quinquennial return, the second of its kind, as prescribed under the Revised Manual. During the quinquennial period the returns show a large increase in the number of wells and tanks for irrigation, though the reported figures, owing to the comparative novelty of this return, may be accepted with some caution.

PRESIDENCY PROPER EXCLUSIVE OF RATNÁGIRI.

| Wells and Tanks. | 1886-87. | | 1891-92. | | Increase. | | Decrease. | |
|---|---|---|---|---|---|---|---|---|
| | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. |
| | No. | No. | No. | No. | No. | No. | No. | No. |
| 1. Wells for irrigation ... ... ... | 103,791 | 59,609 | 108,274 | 65,322 | 4,483 | 5,713 | ... | ... |
| 2. Other wells (exclusive of those in disuse) ... ... ... ... | 69,111 | 32,967 | 82,734 | 36,542 | 13,623 | 3,575 | ... | ... |
| 3. Tanks for irrigation ... ... ... | 681 | 8,031 | 791 | 10,009 | 110 | 1,978 | ... | ... |
| 4. Other tanks (exclusive of those in disuse) ... ... ... ... ... | 2,055 | 20,482 | 1,487 | 19,715 | ... | ... | 568 | 767 |

69. *Wells for irrigation.*—The net increase of 4,400 under *pakha* and 5,700 under *kacha* wells chiefly occurs in the districts noted in the margin. The decrease in Surat is apparently due to transfer of works for irrigation to the head "other wells" in the returns, the latter having increased in a corresponding proportion. The total increase is, of course, partly to be ascribed to the repair of old wells formerly in disuse. In Ahmadabad the abandonment of the well assessment is a contributory and, perhaps, a principal cause, while in Bijápur and Dhárwár irrigation works have been encouraged by large takávi advances. These causes have operated also in other districts, though not noticed by the Collectors. The considerable decrease in the *pakka* wells of Ahmadnagar and Kánara is apparently due to wrong classification in the previous return, as it is more than counterbalanced by an increase under *kacha* wells.

| District. | Pakka. | Kacha. |
|---|---|---|
| | No. | No. |
| Ahmadabad ... ... | +1,057 | -79 |
| Kaira ... ... ... | +474 | +177 |
| Surat ... ... ... | -77 | -236 |
| Khándesh ... ... | +932 | +311 |
| Násik ... ... .. | +762 | +425 |
| Poona ... ... ... | +1,570 | +33 |
| Sholápur ... ... ... | +634 | +776 |
| Ahmadnagar ... ... | -561 | +804 |
| Belgaum ... ... ... | -14 | +884 |
| Bijápur ... ... ... | +21 | +1,093 |
| Kánara ... ... ... | —311 | +941 |
| Dhárwár ... ... .. | +43 | +366 |

70. *Tanks for irrigation*—are found in considerable number only in Gujarát, in the Karnátak, and in Kánara, and have increased in all districts except Surat, especially under the head 'kacha' (Ahmadabad 237, Kaira 143, Belgaum 215, Dhárwár 382, Kánara 1,160). The increase is generally attributed to the construction of new tanks, but, as pointed out by the Collector of Ahmadabad, it is also explained in part by the altered practice of the Survey Department,—tanks for irrigation having been formerly included in the survey numbers, of which they formed a part and being now shown separately.

| District. | Pakka. | Kacha |
|---|---|---|
| | No. | No. |
| Ahmadabad ... ... | 9 | 1,114 |
| Kaira ... ... ... | 55 | 858 |
| Surat ... ... ... | 12 | 949 |
| Belgaum ... ... .. | 7 | 438 |
| Dhárwár ... ... .. | 358 | 2,329 |
| Kánara ... ... ... | 216 | 4,105 |

Wells and tanks other than those for irrigation require no detailed remark. The decrease shown in the table occurs chiefly in Násik (582 *pakka* and 356 *kacha*), and is not explained by the Collector.

## B.—RAINFALL.

Season, 1891-92.

71. The rainfall for each district is fully analysed in the appended tables (pp. xxv-xxxvii). In the following table the rainfall at district head-quarter towns is compared with the average and with last year :—

*Rainfall at District Head-quarters.*

| No. | | District Head-quarters. | Annual Rainfall ending 31st December. | | | | |
|---|---|---|---|---|---|---|---|
| | | | Average of eleven years ending 1886. | 1890. | | 1891. | |
| | | | | Fall. | Rainy days. | Fall. | Rainy days. |
| | | | Inches. | Inches. | | Inches. | |
| 1 | Deccan. | Dhulia (Khándesh) ... ... | 25·79 | 25·24 | 37 | 24·58 | 34 |
| 2 | Deccan. | Násik ... ... ... ... | 33·74 | 29·30 | 49 | 25·99 | 43 |
| 3 | Deccan. | Ahmadnagar ... ... ... | 25·11 | 21·60 | 36 | 16·18 | 28 |
| 4 | Deccan. | Poona ... ... ... ... | 31·06 | 39·52 | 62 | 18·68 | 42 |
| 5 | Deccan. | Sholápur ... ... ... | 33·33 | 28·33 | 34 | 23·76 | 25 |
| 6 | Deccan. | Sátára ... ... ... ... | 40·84 | 37·45 | 80 | 36·30 | 48 |
| 7 | Karnátak. | Belgaum ... ... ... | 46·80 | 49·85 | 83 | 43·34 | 72 |
| 8 | Karnátak. | Bijápur ... ... ... | 26·79 | 28·56 | 38 | 13·70 | 31 |
| 9 | Karnátak. | Dhárwár ... ... ... | 32·95 | 28·54 | 65 | 27·84 | 61 |
| 10 | Konkan. | Kárwár (Kánara) ... ... | 116·62 | 121·04 | 98 | 82·28 | 102 |
| 11 | Konkan. | Ratnágiri ... ... ... | 100·73 | 120·16 | 96 | 91·17 | 83 |
| 12 | Konkan. | Alibág (Kolába) ... ... | 84·79 | 95·65 | 90 | 82·05 | 83 |
| 13 | Konkan. | Thána ... ... ... ... | 99·12 | 98·00 | 97 | 99·35 | 84 |
| 14 | Gujarát. | Surat ... ... ... ... | 44·06 | 56·35 | 53 | 63·89 | 40 |
| 15 | Gujarát. | Broach... ... ... ... | 44·21 | 26·98 | 37 | 58·64 | 38 |
| 16 | Gujarát. | Kaira ... ... ... ... | 37·13 | 27·24 | 46 | 28·27 | 26 |
| 17 | Gujarát. | Godhra (Panch Maháls) ... | 43·24 | 37·11 | 46 | 29·08 | 34 |
| 18 | Gujarát. | Ahmadabad .... ... ... | 29·92 | 22·75 | 43 | 25·59 | 20 |

The fall was generally below average except in South Gujarát (Surat and Broach), where abnormally heavy rain fell at end of July. The south-west monsoon set in very late, retarding the kharif sowings. The rabi rains, though generally good for sowing, closed too soon, and crops suffered from deficiency of moisture, especially in the eastern rabi tracts of the Deccan and Karnátak.

*Deccan.*—In Khándesh, Násik and the western tracts growing rice and hill-grains, the rainfall was on the whole seasonable and sufficient, and the kharif and rabi outturn generally fair. In the eastern tracts the kharif rain was seasonable for sowing, but deficient later on. The kharif crops were somewhat relieved by general heavy showers in September. These showers were also favourable for rabi sowings. Rabi crops, however, were greatly damaged by failure of the late rains. Thus the outturn, both kharif and rabi, was generally poor in these tracts, necessitating relief measures. Forests were thrown open for grazing, and large takávi advances (Rs. 2,39,000 in 1891-92 against Rs. 30,000 in 1890-91) were made. Large sums were also spent in providing water-supply.

*Karnátak.*—In the south-western rice tracts of Belgaum and Dhárwár the kharif rain was on the whole favourable. In the north-eastern parts of these districts, and in the whole of Bijápur, the rainfall was scant and irregular, and both kharif and rabi crops, where sown, were seriously affected. Fodder and drinking water failed. Government forests were thrown open for grazing, and large takávi advances (Rs. 7,94,000 in 1891-92 against Rs. 1,15,000 in 1890-91) were made. Large sums were also spent on improving the water-supply. Famine was officially declared, and famine relief works opened. The attendance on famine works was, however, comparatively small, and owing to the large imports of grain by rail and the existence of a considerable surplus stock, prices remained moderate and fairly level.

*Konkan.*—The rainfall, though late, especially in the north, was on the whole seasonable and sufficient, and the early crops were fairly good. Late rice and rabi crops suffered from deficiency of closing rains.

*Gujarát.*—The kharif rain was on the whole favourable, though sowings were generally late (end of June). Crops were considerably damaged in Surat and Broach by the abnormally heavy fall at end of July. Rabi rains closed too soon, diminishing the outturn of rice and rabi crops in Ahmadabad and the Panch Maháls.

Season, 1892-93.

72. The season has been so far peculiar that, though the south-west monsoon broke early (27th May) with heavy rain on the Kánara and Ratnágiri litoral, it did not proceed further, the current being obstructed by cyclonic depressions off the West Coast. Most of the June rain came from the north-east—an unusual feature, but it brought the urgently demanded relief to the distressed tracts of the East Deccan and Karnátak. The usual kharif area in these tracts was at once fully sown, and large areas ordinarily devoted to rabi were also put under kharif, to the extent, as estimated, of one-half the rabi area in Belgaum and about one-fourth in Sholápur and Bijápur. The early rain also speedily removed all further distress in respect to water-supply and fodder.

The south-west monsoon rain proper set in generally from the second week of July, and prospects thenceforward improved everywhere. The rainfall in August and September, though excessive in some parts, was on the whole seasonable. Unusually heavy rain fell at end of October throughout the Deccan, Karnátak and Konkan, and was injurious to reaped and ripe kharif crops and for rabi seedlings. The weather has cleared since November, and there is every prospect of a good rabi harvest.

### C.—CROP EXPERIMENTS.

Rice 20; oil-seeds 18; wheat 9; nágli 7; mixed crops 7; sugarcane and pulses 5 each; kodra 4; navani and cotton 2 each; maize, jowár, potatoes and coriander 1 each.

73. The number of experiments reported in 1891-92 was 83, as shown in the margin, against 78 in 1890-91. Of these 30 were from the Northern, 29 from the Central and 24 from the Southern Divisions. A separate report will be submitted to Government regarding these experiments.

Their importance has been recently enhanced by the requirement of quinquennial outturn returns for the Secretary of State (Government Resolution No. 3203, dated 4th April 1892). The "formulæ" of 1884 were intended to supply this information, but they have been greatly discredited by subsequent experience derived from actual test, and the crop experiment results will, when sufficiently numerous and complete, make it possible to supersede them altogether. Under Government Resolution No. 8139 of 13th October 1892 the experiments will henceforward be carried out on an extended scale with this object.

There are at present no data for outturn estimates in Sind. Arrangements for the institution of crop experiments are under the consideration of the Commissioner.

## VIII.—TRADE AND TRADE STATISTICS.

74. The compilation of the Rail-borne Trade returns of the Presidency Proper is now assigned to the Examiner of Guaranteed Railway Accounts, this office being responsible for the review and value rates. A detailed report for the year ending 31st March 1892 has already been submitted to Government as also the Sind report with review. The trade registered is shown below:—

| Year. | Presidency Proper. | | | | Sind. | | | |
|---|---|---|---|---|---|---|---|---|
| | External Trade. | | Local Trade. | Total Trade. | External Trade. | | Local Trade. | Total Trade. |
| | Imports. | Exports. | | | Imports. | Expors. | | |
| | (Figures in lákhs of maunds, 1 maund = 82⅔lbs. | | | | | | | |
| Average ... ... | 288 | 94 | 286 | 668 | 59½ | 15 | 65½ | 140 |
| 1890-91 ... ... | 289 | 102 | 284 | 675 | 90 | 23 | 72 | 185 |
| 1891-92 ... ... | 383 | 118 | 333 | 834 | 135 | 33 | 86 | 254 |
| Increase + or decrease — over average ... ... | +95 | +24 | +47 | +166 | +75½ | +18 | +20½ | +114 |
| Increase + or decrease — over last year ... ... | +94 | +16 | +49 | +159 | +45 | +10 | +14 | + 69 |

The total trade of the Presidency Proper increased by 25 and 24 per cent. respectively over average and last year, and the total trade of Sind by 81 and 37 per cent. To the total trade of Sind the Punjáb contributed 98 per cent. The Road-borne trade was registered as usual at six selected *nákas*. Road traffic was also registered by the Public Works Department in parts of Gujarát, as noticed last year, with a special view to the estimate of traffic for projected feeder railway lines.

IX.—ARCHÆOLOGY.

75. No reports on the subject have been received from the district officers under Government Resolution No. 1672, dated 13th April 1889, General Department.

X.—MINERAL STATISTICS.

76. The annual return of Minerals for the calendar year 1891 was submitted to the Government of India in April last. For this Presidency the return exhibits quarry stones only, no others being worked.

A prospecting license has been granted to an English prospector in respect of diamonds and other precious stones in the Bádámi, Muddebihál and Bágalkot tálukas of the Bijápur district. He has also been granted a mining lease for slate, steatite and fuller's earth in the same district.

XI.—COLLECTIONS FOR THE IMPERIAL INSTITUTE.

77. During the year under report the following collections were made for the Imperial Institute :—

(*a*) Silk and cotton products and manufactures (under Government Resolution No. 5903 of 29th August 1891). This collection is not yet complete, and is to be sent to England in February next.

(*b*) A collection of brushes of native manufacture from all kinds of fibre.

(*c*) Samples of palm fibre (Caryota urens).

CONCLUSION.

78. Mr. Lushington, Divisional Inspector, S. D., has done good work during the year, both in respect of his duties of supervision and in the famine enquiries, which he was called upon to make. Mr. Young has started work in the Central Division with much energy.

Mr. Mollison, Superintendent of Farms, has again earned high commendation for his untiring zeal in all duties committed to his charge. The farms and agricultural experiments especially, have greatly improved under his management. Through his patient and steady study of agricultural problems, Mr. Mollison's services, though he has been a comparatively short time in the country, are most valuable to this Department.

Mr. Mehta, the Superintendent, Bhadgaon Farm, has continued to give satisfaction as a careful and intelligent officer.

I have pleasure in recording the excellent services rendered by my Personal Assistant, Ráo Bahádur Ichhárám Bhagvándás, who, as heretofore, has performed his duties with most praiseworthy zeal and ability. The good work done by Mr. Yashwantráo Nilkanth, Superintendent of the Office, also calls for recognition. He acted as Personal Assistant for three months during Mr. Ichhárám's absence on privilege leave.

I have the honour to be,
Sir,
Your most obedient Servant,
E. L. CAPPEL,
Director, Land Records and Agriculture,
Bombay.

# STATISTICS.

## A.—AGRICULTURAL.

I.—Area of Available Statistics.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

VI.—Sources of Water-supply.

III. A.—Details under Khari'f and Rabi Crops.

III. B.—Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1891-92.

| No. | District. | Number and Area of Villages.* | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Surveyed Alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 832 | 2,318,548 | 52 | 123,518 | 884 | 2,442,066 | 448 | 1,056,338 | 334 | 1,262,210 | 36 | 98,917 | 868 | 2,417,465 | ... | ..... | 16 | 24,601 | 16 | 24,601 |
| 2 | Kaira ... ... ... ... | 563 | 994,258 | 28 | 27,464 | 591 | 1,021,722 | 436 | 757,834 | 92 | 178,297 | ... | ..... | 528 | 936,131 | 35 | 58,127 | 28 | 27,464 | 63 | 85,591 |
| 3 | Panch Mahals ... ... ... | 611½ | 901,434 | 79½ | 126,476 | 691 | 1,027,910 | 403 | 626,467 | 149½ | 198,182 | 44½ | 72,563 | 597 | 897,212 | 59 | 76,785 | 35 | 53,913 | 94 | 130,698 |
| 4 | Broach ... ... ... ... | 408 | 917,848 | 15 | 18,724 | 423 | 936,572 | 407 | 916,669 | 1 | 1,179 | ... | ..... | 408 | 917,848 | ... | ..... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat... ... ... ... ... | 820½ | 1,026,749 | 32½ | 31,055 | 853 | 1,057,804 | 810½ | 1,014,514 | 10 | 12,235 | 4½ | 5,254 | 825 | 1,032,003 | ... | ..... | 28 | 25,801 | 28 | 25,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khandesh ... ... ... ... | 3,223 | 5,446,230 | 111½ | 211,668 | 3,334½ | 5,657,898 | 2,680½ | 4,625,328 | 187 | 365,705 | 63½ | 109,091 | 2,931 | 5,100,124 | 355½ | 455,197 | 48 | 102,577 | 403½ | 557,774 |
| 7 | Násik ... ... ... ... | 1,512 | 3,421,098 | 184 | 300,759 | 1,696 | 3,721,857 | 1,500 | 3,396,409 | ... | ..... | 80 | 167,246 | 1,580 | 3,563,655 | 12 | 24,689 | 104 | 133,513 | 116 | 158,202 |
| 8 | Ahmadnagar ... ... ... | 1,223½ | 3,672,341 | 150½ | 544,881 | 1,374 | 4,217,222 | 1,223½ | 3,672,341 | ... | ..... | 110 | 440,388 | 1,333½ | 4,112,729 | ... | ..... | 40½ | 104,493 | 40½ | 104,493 |
| 9 | Poona ... ... ... ... | 1,002½ | 2,872,419 | 201½ | 505,852 | 1,204 | 3,378,271 | 1,002½ | 2,872,338 | ... | ..... | 162½ | 464,575 | 1,165 | 3,336,913 | ... | 81 | 39 | 41,277 | 39 | 41,358 |
| 10 | Sholapur ... ... ... ... | 665 | 2,697,637 | 52 | 209,607 | 717 | 2,907,244 | 665 | 2,697,637 | ... | ..... | 52 | 209,607 | 717 | 2,907,244 | ... | ..... | ... | ..... | ... | ..... |
| 11 | Sátára ... ... ... ... | 962 | 2,476,991 | 396 | 608,286 | 1,358 | 3,085,277 | 961 | 2,461,310 | ... | ..... | 220 | 403,071 | 1,181 | 2,864,381 | 1 | 15,681 | 176 | 205,215 | 177 | 220,896 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 913 | 2,347,346 | 221 | 536,758 | 1,134 | 2,884,104 | 913 | 2,347,346 | ... | ..... | 162 | 468,053 | 1,075 | 2,815,399 | ... | ..... | 59 | 68,705 | 59 | 68,705 |
| 13 | Bijápur ... ... ... ... | 1,011 | 3,205,704 | 162 | 422,031 | 1,173 | 3,627,735 | 1,011 | 3,205,704 | ... | ..... | 155 | 395,560 | 1,166 | 3,601,264 | ... | ..... | 7 | 26,471 | 7 | 26,471 |
| 14 | Dhárwár ... ... ... ... | 1,289 | 2,689,251 | 184 | 256,576 | 1,473 | 2,945,827 | 1,289 | 2,689,251 | ... | ..... | 137 | 180,871 | 1,426 | 2,870,122 | ... | ..... | 47 | 75,705 | 47 | 75,705 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | 1,605 | 2,180,169 | 91 | 110,777 | 1,696 | 2,290,946 | 1,588 | 2,169,753 | 17 | 10,416 | 35 | 48,953 | 1,640 | 2,229,122 | ... | ..... | 56 | 61,824 | 56 | 61,824 |
| 16 | Kolába ... ... ... ... | 1,538 | 1,321,321 | 94 | 42,613 | 1,632 | 1,363,934 | 1,046 | 787,540 | 489 | 524,384 | 10 | 6,262 | 1,545 | 1,318,186 | 3 | 9,397 | 84 | 36,351 | 87 | 45,748 |
| 17 | Ratnagiri ... ... ... ... | 1,274½ | 2,403,138 | 62 | 110,029 | 1,336½ | 2,513,167 | 108½ | 284,264 | 188 | 318,716 | 4 | 12,228 | 300½ | 595,208 | 978 | 1,820,158 | 58 | 97,801 | 1,036 | 1,917,959 |
| 18 | Kánara ... ... ... ... | 1,416 | 2,522,765 | ... | ..... | 1,416 | 2,522,765 | 1,416 | 2,522,765 | ... | ..... | ... | ..... | 1,416 | 2,522,765 | ... | ..... | ... | ..... | ... | ..... |
| | Total, A ... | 20,869¾ | 43,415,247 | 2,116¼ | 4,187,074 | 22,986 | 47,602,321 | 17,908¾ | 38,083,808 | 1,517½ | 2,871,324 | 1,275¾ | 3,082,639 | 20,702 | 44,037,771 | 1,443½ | 2,460,115 | 840½ | 1,104,435 | 2,284 | 3,564,550 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | 860 | 8,227,549 | 14 | 35,700 | 874 | 8,263,249 | 774 | 3,492,549 | 62 | 2,398,232 | 13 | 26,841 | 849 | 5,917,622 | 24 | 2,336,768 | 1 | 8,859 | 25 | 2,345,627 |
| 20 | Hyderabad... ... ... ... | 1,395 | 5,482,769 | 57 | 263,847 | 1,452 | 5,747,616 | 1,392 | 5,463,574 | 3 | 20,195 | 57 | 263,847 | 1,452 | 5,747,616 | ... | ..... | ... | ..... | ... | ..... |
| 21 | Shikárpur ... ... ... ... | 1,175 | 4,949,757 | 16 | 276,930 | 1,191 | 5,226,687 | 1,143 | 4,069,044 | ... | ..... | 13 | 231,518 | 1,156 | 4,300,562 | 32 | 880,713 | 3 | 45,412 | 35 | 926,125 |
| 22 | Upper Sind Frontier ... ... | 298 | 1,574,544 | 7 | 40,718 | 305 | 1,615,262 | 232 | 686,094 | 1 | 120,531 | 6 | 27,333 | 239 | 833,958 | 65 | 767,919 | 1 | 13,385 | 66 | 781,304 |
| 23 | Thár and Párkar. ... ... | 291 | 8,145,500 | ... | ..... | 291 | 8,145,500 | ... | ..... | 291 | 8,145,500 | ... | ..... | 291 | 8,145,500 | ... | ..... | ... | ..... | ... | ..... |
| | Total, B ... | 4,019 | 28,381,119 | 94 | 617,195 | 4,113 | 28,998,314 | 3,541 | 13,711,261 | 357 | 10,684,458 | 89 | 549,539 | 3,987 | 24,945,258 | 121 | 3,985,400 | 5 | 67,656 | 126 | 4,053,056 |
| | Grand Total ... | 24,888¾ | 71,796,366 | 2,210¼ | 4,804,269 | 27,099 | 76,600,635 | 21,449¾ | 51,795,069 | 1,874½ | 13,555,782 | 1,364¾ | 3,632,178 | 24,689 | 68,983,029 | 1,564½ | 6,445,515 | 845½ | 1,172,091 | 2,410 | 7,617,606 |

*Exclusive of Foreign Territory, Feudatory and Tributary States.

# II.—Area, Cultivated and Uncultivated, 1891-92.

| No. | District. | | Total area as in columns 5, 6 and 7 of Return No. 1. | Cultivated Area. Gross area cropped. | Deduct area cropped more than once. | Remainder net area cropped. | Add current Fallows. | Total columns 5 and 6. | Details of column 7. Assessed Land. | Unassessed Land. | Uncultivated Area. Available for cultivation. Assessed Land. | Unassessed Land. | Not available for cultivation. Forest. | Other. | Total columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | | | Acres. | | | | | Acres. | | | | | | | Acres. |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... | Rayatwari ... ... | 1,056,338 | 724,839 | 13,273 | 711,566 | 73,865 | 784,431 | 781,958 | 2,473 | 68,210 | 13,397 | 21,554 | 168,746 | 271,907 |
| | | Other Government. | 1,262,210 | 611,407 | 1,788 | 609,619 | 377,831 | 987,450 | 987,174 | 276 | ..... | 6,265 | ..... | 268,495 | 274,760 |
| | | Alienated ... ... | 98,917 | 54,815 | 108 | 54,707 | 44,129 | 98,836 | 98,836 | ..... | ..... | ..... | ..... | 81 | 81 |
| | | Total ... | 2,417,465 | 1,391,061 | 15,169 | 1,375,892 | 494,825 | 1,870,717 | 1,867,968 | 2,749 | 68,210 | 19,662 | 21,554 | 437,322 | 546,748 |
| 2 | Kaira ... ... ... | Rayatwari ... ... | 757,834 | 556,643 | 11,706 | 544,937 | 40,016 | 584,953 | 584,510 | 443 | 72,690 | 1,144 | 40 | 99,007 | 172,881 |
| | | Other Government. | 178,297 | 160,127 | 3,393 | 156,734 | 5,878 | 162,612 | 162,584 | 28 | 277 | 21 | ..... | 15,387 | 15,685 |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 936,131 | 716,770 | 15,099 | 701,671 | 45,894 | 747,565 | 747,094 | 471 | 72,967 | 1,165 | 40 | 114,394 | 188,566 |
| 3 | Panch Mahále ... ... | Rayatwari ... ... | 626,467 | 290,362 | 54,813 | 235,549 | 30,210 | 265,759 | 264,100 | 1,659 | 80,317 | 95,488 | 143,466 | 41,437 | 360,708 |
| | | Other Government. | 198,182 | 70,202 | 5,137 | 65,065 | 85,550 | 150,615 | 150,448 | 167 | ..... | 1,307 | 16,730 | 29,530 | 47,567 |
| | | Alienated ... ... | 72,563 | 39,996 | 5,535 | 34,461 | 29,881 | 64,342 | 64,342 | ..... | 688 | ..... | ..... | 7,533 | 8,221 |
| | | Total ... | 897,212 | 400,560 | 65,485 | 335,075 | 145,641 | 480,716 | 478,890 | 1,826 | 81,005 | 96,795 | 160,196 | 78,500 | 416,496 |
| 4 | Broach ... ... ... | Rayatwari ... ... | 916,669 | 599,422 | 923 | 598,499 | 49,835 | 648,334 | 640,135 | 8,199 | 24,206 | 1,662 | 1 | 242,466 | 268,335 |
| | | Other Government. | 1,179 | 880 | ..... | 880 | 263 | 1,143 | 1,143 | ..... | ..... | ..... | ..... | 36 | 36 |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total .. | 917,848 | 600,302 | 923 | 599,379 | 50,098 | 649,477 | 641,278 | 8,199 | 24,206 | 1,662 | 1 | 242,502 | 268,371 |
| 5 | Surat ... ... ... | Rayatwari ... ... | 1,014,514 | 521,249 | 39,147 | 482,102 | 243,761 | 725,863 | 724,119 | 1,744 | 33,889 | 29,558 | 44,589 | 180,615 | 288,651 |
| | | Other Government. | 12,235 | 5,438 | 187 | 5,251 | 4,178 | 9,429 | 9,429 | ..... | 923 | 759 | ..... | 1,124 | 2,806 |
| | | Alienated ... .. | 5,254 | 3,778 | 21 | 3,757 | 1,217 | 4,974 | 4,974 | ..... | 131 | ..... | ..... | 149 | 280 |
| | | Total ... | 1,032,003 | 530,465 | 39,355 | 491,110 | 249,156 | 740,266 | 738,522 | 1,744 | 34,943 | 30,317 | 44,589 | 181,888 | 291,737 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | Rayatwari ... ... | 4,625,329 | 2,933,432 | 12,884 | 2,920,548 | 130,925 | 3,051,473 | 3,045,635 | 5,838 | 396,002 | 241,195 | 353,368 | 583,290 | 1,573,855 |
| | | Other Government. | 365,705 | 51,714 | 34 | 51,680 | 617 | 52,297 | 3,003 | 49,294 | 5 | 131,083 | 181,709 | 611 | 313,408 |
| | | Alienated ... ... | 109,091 | 73,828 | 193 | 73,635 | 9,659 | 83,294 | 83,259 | 35 | 7,601 | 3,978 | 750 | 13,468 | 25,797 |
| | | Total ... | 5,100,124 | 3,058,974 | 13,111 | 3,045,863 | 141,201 | 3,187,064 | 3,131,897 | 55,167 | 403,608 | 376,256 | 535,827 | 597,369 | 1,913,060 |
| 7 | Násik ... ... ... | Rayatwari ... ... | 3,396,409 | 1,937,357 | 16,076 | 1,921,281 | 266,077 | 2,187,358 | 2,186,828 | 530 | 73,110 | 45,743 | 779,086 | 311,112 | 1,209,051 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 167,246 | 110,728 | 558 | 110,170 | 18,679 | 128,849 | 128,797 | 52 | 6,279 | 8,944 | 1,462 | 21,712 | 38,397 |
| | | Total ... | 3,563,655 | 2,048,085 | 16,634 | 2,031,451 | 284,756 | 2,316,207 | 2,315,625 | 582 | 79,389 | 54,687 | 780,548 | 332,824 | 1,247,448 |
| 8 | Ahmadnagar ... ... | Rayatwari ... ... | 3,672,341 | 2,462,758 | 19,704 | 2,443,054 | 275,633 | 2,718,687 | 2,718,313 | 374 | 51,891 | 48,891 | 539,343 | 313,529 | 953,654 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 440,388 | 323,741 | 1,733 | 322,008 | 38,860 | 360,868 | 360,835 | 33 | 11,285 | 11,196 | 331 | 56,708 | 79,520 |
| | | Total ... | 4,112,729 | 2,786,499 | 21,437 | 2,765,062 | 314,493 | 3,079,555 | 3,079,148 | 407 | 63,176 | 60,087 | 539,674 | 370,237 | 1,033,174 |
| 9 | Poona ... ... ... | Rayatwari ... ... | 2,872,338 | 1,829,544 | 39,909 | 1,789,635 | 290,950 | 2,080,585 | 2,080,510 | 75 | 17,724 | 223 | 445,351 | 328,455 | 791,753 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 464,575 | 312,053 | 6,000 | 306,053 | 65,168 | 371,221 | 370,991 | 230 | 241 | ..... | 1,729 | 91,384 | 93,354 |
| | | Total ... | 3,336,913 | 2,141,597 | 45,909 | 2,095,688 | 356,118 | 2,451,806 | 2,451,501 | 305 | 17,965 | 223 | 447,080 | 419,839 | 885,107 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... ... | Rayatwári ... ... | 2,697,637 | 2,048,609 | 21,244 | 2,027,365 | 254,093 | 2,281,458 | 2,281,024 | 434 | 17,197 | 985 | 177,568 | 219,329 | 416,179 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 209,607 | 151,227 | 1,838 | 149,389 | 25,666 | 175,055 | 174,886 | 169 | 125 | 3,624 | ..... | 30,803 | 34,552 |
| | | Total ... | 2,907,244 | 2,199,836 | 23,082 | 2,176,754 | 279,759 | 2,456,513 | 2,455,910 | 603 | 17,322 | 5,709 | 177,568 | 250,132 | 450,731 |
| 11 | Sátára ... ... | Rayatwári ... ... | 2,461,310 | 1,552,539 | 74,942 | 1,477,597 | 301,805 | 1,779,402 | 1,779,136 | 266 | 26,487 | 5,112 | 423,010 | 227,299 | 681,908 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 403,071 | 261,162 | 17,194 | 243,968 | 100,500 | 344,468 | 344,467 | 1 | 418 | 3,228 | 12,385 | 42,572 | 58,603 |
| | | Total ... | 2,864,381 | 1,813,701 | 92,136 | 1,721,565 | 402,305 | 2,123,870 | 2,123,603 | 267 | 26,905 | 8,340 | 435,395 | 269,871 | 740,511 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... | Rayatwári ... ... | 2,347,346 | 1,378,125 | 20,614 | 1,357,511 | 324,653 | 1,682,164 | 1,680,517 | 1,647 | 55,467 | 18,807 | 439,268 | 151,640 | 665,182 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 468,053 | 303,822 | 2,339 | 301,483 | 103,706 | 405,189 | 405,180 | 9 | 29,414 | 1,469 | 2,907 | 29,074 | 62,864 |
| | | Total ... | 2,815,399 | 1,681,947 | 22,953 | 1,658,994 | 428,359 | 2,087,353 | 2,085,697 | 1,656 | 84,881 | 20,276 | 442,175 | 180,714 | 728,046 |
| 13 | Bijápur ... ... | Rayatwári ... ... | 3,205,704 | 2,432,804 | 2,499 | 2,430,305 | 352,842 | 2,783,147 | 2,782,783 | 364 | 71,575 | 18,993 | 162,451 | 169,538 | 422,557 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 395,560 | 285,286 | 231 | 285,055 | 45,453 | 330,508 | 330,492 | 16 | 12,152 | 1,176 | 27,126 | 24,598 | 65,052 |
| | | Total ... | 3,601,264 | 2,718,090 | 2,730 | 2,715,360 | 398,295 | 3,113,655 | 3,113,275 | 380 | 83,727 | 20,169 | 189,577 | 194,136 | 487,609 |
| 14 | Dhárwár ... ... | Rayatwári ... ... | 2,689,251 | 1,544,587 | 21,390 | 1,523,197 | 651,631 | 2,174,828 | 2,174,664 | 164 | 47,417 | 1 | 276,336 | 190,669 | 514,423 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 180,871 | 95,125 | 1,654 | 93,471 | 45,715 | 139,186 | 138,994 | 192 | 11,127 | 14,408 | ..... | 16,150 | 41,685 |
| | | Total .. | 2,870,122 | 1,639,712 | 23,044 | 1,616,668 | 697,346 | 2,314,014 | 2,313,658 | 356 | 58,544 | 14,409 | 276,336 | 206,819 | 556,108 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... | Rayatwári ... ... | 2,169,758 | 467,202 | 3,230 | 463,972 | 434,046 | 898,018 | 894,649 | 3,369 | 44,097 | 68,802 | 483,779 | 675,057 | 1,271,735 |
| | | Other Government | 10,416 | 1,070 | 7 | 1,063 | 5,959 | 7,022 | 7,022 | ..... | 13 | 2,134 | 197 | 1,050 | 3,394 |
| | | Alienated ... ... | 48,953 | 7,551 | 50 | 7,501 | 41,452 | 48,953 | 48,953 | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,229,122 | 475,823 | 3,287 | 472,536 | 481,457 | 953,993 | 950,624 | 3,369 | 44,110 | 70,936 | 483,976 | 676,107 | 1,275,129 |
| 16 | Kolába ... ... | Rayatwári ... ... | 787,540 | 236,702 | 6,423 | 230,279 | 176,877 | 407,156 | 404,858 | 2,298 | 4,651 | 41,555 | 193,458 | 140,720 | 380,384 |
| | | Other Government | 524,384 | 161,800 | 5,211 | 156,589 | 136,194 | 292,783 | 292,485 | 298 | 4 | 11,096 | 87,814 | 132,687 | 231,601 |
| | | Alienated ... ... | 6,262 | 2,263 | 20 | 2,243 | 2,604 | 4,847 | 4,847 | ..... | ..... | 608 | ..... | 807 | 1,415 |
| | | Total ... | 1,318,186 | 400,765 | 11,654 | 389,111 | 315,675 | 704,786 | 702,190 | 2,596 | 4,655 | 53,259 | 281,272 | 274,214 | 613,400 |
| 17 | Ratnágiri ... ... | Rayatwári ... ... | 264,264 | 90,181 | 3,253 | 86,928 | 81,106 | 168,034 | 167,952 | 82 | 456 | 1,961 | 6,869 | 86,944 | 96,230 |
| | | Other Government | 318,716 | 95,714 | 4,634 | 91,080 | 127,869 | 218,949 | 218,932 | 17 | 494 | 1,918 | 5,923 | 91,432 | 99,767 |
| | | Alienated ... ... | 12,228 | 7,714 | 532 | 7,182 | 1,712 | 8,894 | 8,894 | ..... | ..... | 574 | ..... | 2,760 | 3,334 |
| | | Total ... | 595,208 | 193,609 | 8,419 | 185,190 | 210,687 | 395,877 | 395,778 | 99 | 950 | 4,453 | 12,792 | 181,136 | 199,331 |
| 18 | Kánara ... ... | Rayatwári ... ... | 2,522,765 | 249,854 | 12,351 | 237,503 | 87,243 | 324,746 | 324,619 | 127 | 60,341 | 1,402 | 1,934,379 | 201,897 | 2,198,019 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,522,765 | 249,854 | 12,351 | 237,503 | 87,243 | 324,746 | 324,619 | 127 | 60,341 | 1,402 | 1,934,379 | 201,897 | 2,198,019 |
| | Total, A ... | Rayatwári ... ... | 38,083,808 | 21,856,209 | 374,381 | 21,481,828 | 4,064,568 | 25,546,396 | 25,516,310 | 30,086 | 1,145,727 | 636,019 | 6,423,916 | 4,331,750 | 12,537,412 |
| | | Other Government | 2,871,324 | 1,158,352 | 20,391 | 1,137,961 | 744,339 | 1,882,300 | 1,832,220 | 50,080 | 1,716 | 154,583 | 292,373 | 540,352 | 949,024 |
| | | Alienated ... ... | 3,082,639 | 2,033,089 | 38,006 | 1,995,083 | 574,401 | 2,569,484 | 2,568,747 | 737 | 79,461 | 49,205 | 46,690 | 337,799 | 513,155 |
| | | Total ... | 44,037,771 | 25,047,650 | 432,778 | 24,614,872 | 5,383,308 | 29,998,180 | 29,917,277 | 80,903 | 1,226,904 | 839,807 | 6,762,979 | 5,209,901 | 14,039,591 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 5,917,622 | 431,932 | 28,319 | 403,613 | 446,863 | 850,476 | 760,319 | 90,157 | 74,569 | 1,065,065 | 117,105 | 3,810,407 | 5,067,146 |
| 20 | Hyderabad ... ... ... ... ... | | 5,747,616 | 838,134 | 10,345 | 827,789 | 1,370,411 | 2,198,200 | 1,735,974 | 462,226 | 385,330 | 1,914,933 | 128,951 | 1,120,202 | 3,549,416 |
| 21 | Shikárpur ... ... ... ... ... | | 4,300,562 | 922,877 | 171,585 | 751,292 | 739,669 | 1,490,961 | 1,478,988 | 11,973 | 178,637 | 1,543,777 | 311,138 | 776,049 | 2,809,601 |
| 22 | Upper Sind Frontier ... ... ... | | 833,958 | 208,257 | 19,915 | 188,342 | 334,048 | 522,390 | 436,757 | 85,633 | 31,624 | 123,157 | 46,404 | 110,383 | 311,568 |
| 23 | Thar and Párkar ... ... ... ... | | 8,145,500 | 544,342 | 5,251 | 539,091 | 839,532 | 1,378,623 | 1,086,001 | 292,622 | 72,898 | 370,306 | 131,810 | 6,191,863 | 6,696,877 |
| | | Total, B ... | 24,945,258 | 2,945,542 | 235,415 | 2,710,127 | 3,730,523 | 6,440,650 | 5,498,039 | 942,611 | 743,058 | 5,017,238 | 735,408 | 12,008,904 | 18,501,508 |
| | | Grand Total ... | 68,983,029 | 27,993,192 | 668,193 | 27,324,999 | 9,113,831 | 36,438,830 | 35,415,316 | 1,023,514 | 1,969,962 | 5,857,045 | 7,498,387 | 17,218,805 | 32,544,199 |

# III.—Crops, 1891-92.

| | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet), Sorghum vulgare, &c. | Bájrí (Spiked Millet), Pennisetum Typhoideum. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu), Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Maka), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Eleusine coracana. | Kále, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag), Panicum miliaceum, P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum pilosum. | Amaranth (Rájgíra), Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. | Rayatwári ... ... ... | 192,786 | 111,796 | 53,361 | 76,502 | 13,969 | 2,953 | 7,440 | 1,894 | 59 | 7,541 | 5,478 | ..... | 30 | 30 | 473,839 |
| | | Other Government ... | 149,762 | 79,169 | 12,707 | 88,795 | 3,342 | 566 | 7,554 | 1,001 | 182 | 3,967 | 19,098 | ..... | ..... | ..... | 366,143 |
| | | Alienated ... ... ... | 11,499 | 6,401 | 1,843 | 3,831 | 258 | 250 | 245 | 50 | 25 | 22 | 618 | ..... | ..... | ..... | 25,042 |
| | | Total ... | 354,047 | 197,366 | 67,911 | 169,128 | 17,569 | 3,769 | 15,239 | 2,945 | 266 | 11,530 | 25,194 | ... | 30 | 30 | 865,024 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 57,962 | 197,218 | 82,496 | 11,562 | 5,350 | 320 | 58,709 | 42,022 | 158 | 295 | 1,632 | ..... | 154 | 2 | 457,880 |
| | | Other Government ... | 15,826 | 45,523 | 12,690 | 963 | 311 | 41 | 32,798 | 11,040 | 17 | 335 | 38 | ..... | 26 | 1 | 119,609 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 73,788 | 242,741 | 95,186 | 12,525 | 5,661 | 361 | 91,507 | 53,062 | 175 | 630 | 1,670 | ... | 180 | 3 | 577,489 |
| 3 | Panch Maháls ... | Rayatwári ... ... ... | 2,316 | 36,406 | 39,711 | 12,055 | 1,131 | 70,506 | 11,910 | 9,452 | 126 | 1,558 | 10,147 | 107 | 25 | 952 | 196,402 |
| | | Other Government ... | 1,965 | 9,915 | 10,883 | 1,125 | 119 | 16,345 | 4,909 | 3,373 | ..... | 1,024 | 2,942 | 298 | ..... | 236 | 53,134 |
| | | Alienated ... ... ... | 383 | 4,049 | 4,788 | 1,009 | 153 | 12,165 | 3,383 | 1,725 | 257 | 645 | 1,354 | 33 | ..... | 30 | 29,974 |
| | | Total ... | 4,664 | 50,370 | 55,382 | 14,189 | 1,403 | 99,016 | 20,202 | 14,550 | 383 | 3,227 | 14,443 | 438 | 25 | 1,218 | 279,510 |
| 4 | Broach ... ... | Rayatwári ... ... ... | 105,181 | 14,749 | 19,189 | 92,589 | ..... | 14 | 7,140 | 128 | 9 | 190 | ..... | ..... | 7 | ..... | 239,196 |
| | | Other Government ... | 115 | 9 | 22 | 51 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 198 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 105,296 | 14,758 | 19,211 | 92,640 | ... | 14 | 7,141 | 128 | 9 | 190 | ... | ... | 7 | ... | 239,394 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 113,909 | 7,631 | 105,485 | 35,563 | 1 | 1 | 36,123 | 13,722 | 4 | 145 | 1,005 | 178 | 2 | 595 | 314,364 |
| | | Other Government ... | 1,621 | ..... | 1,039 | 68 | ..... | ..... | 421 | 82 | ..... | ..... | ..... | ..... | ..... | ..... | 3,201 |
| | | Alienated ... ... ... | 2,606 | 8 | 295 | 30 | ..... | ..... | 106 | 54 | ..... | ..... | ..... | ..... | ..... | ..... | 3,099 |
| | | Total ... | 118,136 | 7,639 | 106,819 | 35,631 | 1 | 1 | 36,650 | 13,858 | 4 | 145 | 1,005 | 178 | 2 | 595 | 320,664 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 515,996 | 691,053 | 16,066 | 253,834 | 3 | 1,870 | 3,258 | 9,164 | 282 | 5,040 | 1,698 | 1,219 | 400 | 1,482 | 1,501,365 |
| | | Other Government ... | 1,950 | 6,119 | 9,496 | 6,587 | ..... | 345 | 1,889 | 2,371 | 33 | 544 | 2,347 | 499 | 4 | 20 | 32,204 |
| | | Alienated ... ... ... | 18,641 | 12,577 | 824 | 4,107 | ..... | 328 | 25 | 330 | ..... | 161 | 97 | 47 | 58 | ..... | 37,195 |
| | | Total ... | 536,587 | 709,749 | 26,386 | 264,528 | 3 | 2,543 | 5,172 | 11,865 | 315 | 5,745 | 4,142 | 1,765 | 462 | 1,502 | 1,570,764 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 103,696 | 793,214 | 49,014 | 287,591 | ..... | 1,460 | ..... | 157,835 | 104 | 42,650 | 11 | 3,304 | 101 | 2 | 1,438,982 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 4,495 | 36,533 | 2,406 | 31,401 | ..... | 85 | ..... | 5,799 | 5 | 1,847 | ..... | 349 | 8 | ..... | 82,928 |
| | | Total ... | 108,191 | 829,747 | 51,420 | 318,992 | ... | 1,545 | ... | 163,634 | 109 | 44,497 | 11 | 3,653 | 109 | 2 | 1,521,910 |
| 8 | Ahmadnagar ... | Rayatwári ... ... ... | 887,946 | 876,390 | 11,621 | 229,668 | 138 | 539 | 116 | 30,355 | 1,629 | 10,267 | 71 | 5,263 | 485 | 620 | 2,055,108 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 144,726 | 102,830 | 100 | 24,137 | 84 | 46 | ..... | 44 | 90 | 13 | ..... | 50 | 28 | 2 | 272,150 |
| | | Total ... | 1,032,672 | 979,220 | 11,721 | 253,805 | 222 | 585 | 116 | 30,399 | 1,719 | 10,280 | 71 | 5,313 | 513 | 622 | 2,327,258 |
| 9 | Poona ... ... | Rayatwári ... ... ... | 709,330 | 588,231 | 58,876 | 79,139 | 716 | 1,989 | 141 | 56,559 | 923 | 38,466 | 10 | 7,894 | 92 | 2,314 | 1,544,680 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 110,645 | 126,050 | 6,947 | 13,519 | 131 | 131 | 100 | 5,020 | 127 | 2,205 | ..... | 505 | 9 | 408 | 265,797 |
| | | Total ... | 819,975 | 714,281 | 65,823 | 92,658 | 847 | 2,120 | 241 | 61,579 | 1,050 | 40,671 | 10 | 8,399 | 101 | 2,722 | 1,810,477 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... | 1,376,980 | 170,249 | 15,214 | 51,131 | 840 | 11,369 | 1 | 25 | 784 | 962 | ..... | 170 | 31 | 7,236 | 1,634,992 |
| | | Other Government... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 98,065 | 18,665 | 932 | 3,647 | 50 | 1,088 | ..... | 2 | 84 | 82 | ..... | 5 | ..... | 534 | 123,154 |
| | | Total ... | 1,475,045 | 188,914 | 16,146 | 54,778 | 890 | 12,457 | 1 | 27 | 868 | 1,044 | ..... | 175 | 31 | 7,770 | 1,758,146 |
| 11 | Sátára ... | Rayatwári ... | 453,821 | 521,076 | 27,558 | 46,022 | 5,018 | 6,703 | 110 | 46,889 | 20,161 | 35,872 | 564 | ..... | 250 | 5,300 | 1,169,344 |
| | | Other Government... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 84,244 | 61,917 | 9,963 | 7,520 | 852 | 1,485 | 1 | 13,682 | 6,674 | 9,215 | 2 | ..... | 165 | 415 | 196,135 |
| | | Total ... | 538,065 | 582,993 | 37,521 | 53,542 | 5,870 | 8,188 | 111 | 60,571 | 26,835 | 45,087 | 566 | ..... | 415 | 5,715 | 1,365,479 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 621,794 | 103,704 | 105,578 | 74,004 | 76 | 5,507 | 123 | 43,709 | 61,691 | 24,523 | ..... | ..... | 2 | 120 | 1,040,831 |
| | | Other Government... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 145,689 | 43,921 | 6,796 | 8,956 | 13 | 1,578 | ..... | 5,477 | 11,754 | 3,636 | ..... | ..... | ..... | ..... | 227,820 |
| | | Total ... | 767,483 | 147,625 | 112,374 | 82,960 | 89 | 7,085 | 123 | 49,186 | 73,445 | 28,159 | ..... | ..... | 2 | 120 | 1,268,651 |
| 13 | Bijápur ... | Rayatwári ... | 1,611,664 | 148,023 | 4,027 | 133,805 | 3 | 1,442 | 20 | 136 | 23,342 | 8,200 | ..... | ..... | 1 | 3 | 1,930,666 |
| | | Other Government... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 185,275 | 19,783 | 470 | 10,870 | 2 | 274 | ..... | 5 | 4,564 | 732 | ..... | ..... | ..... | ..... | 221,975 |
| | | Total ... | 1,796,939 | 167,806 | 4,497 | 144,675 | 5 | 1,716 | 20 | 141 | 27,906 | 8,932 | ..... | ..... | 1 | 3 | 2,152,641 |
| 14 | Dhárwár ... | Rayatwári ... | 557,825 | 3,640 | 132,719 | 144,376 | 34 | 203 | 7 | 38,683 | 68,630 | 30,298 | 1 | ..... | ..... | ..... | 976,416 |
| | | Other Government... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 35,024 | 384 | 17,706 | 3,886 | ..... | 3 | ..... | 3,945 | 5,125 | 2,258 | ..... | ..... | ..... | ..... | 68,331 |
| | | Total ... | 592,849 | 4,024 | 150,425 | 148,262 | 34 | 206 | 7 | 42,628 | 73,755 | 32,556 | 1 | ..... | ..... | ..... | 1,044,747 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 31 | ..... | 296,552 | 122 | ..... | 14 | 12,926 | 65,190 | ..... | 26,647 | ..... | ..... | ..... | ..... | 401,482 |
| | | Other Government... | ..... | ..... | 933 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 933 |
| | | Alienated ... | ..... | ..... | 6,682 | ..... | ..... | ..... | ..... | 293 | ..... | 130 | ..... | ..... | ..... | ..... | 7,105 |
| | | Total ... | 31 | ..... | 304,167 | 122 | ..... | 14 | 12,926 | 65,483 | ..... | 26,777 | ..... | ..... | ..... | ..... | 409,520 |
| 16 | Kolába ... | Rayatwári ... | ..... | ..... | 175,264 | ..... | ..... | ..... | 3,041 | 22,624 | 2 | 17,144 | ..... | ..... | ..... | 10 | 218,085 |
| | | Other Government... | ..... | ..... | 58,284 | ..... | ..... | ..... | 14,342 | 39,411 | 15 | 32,531 | ..... | ..... | ..... | ..... | 144,583 |
| | | Alienated ... | ..... | ..... | 1,869 | ..... | ..... | ..... | ..... | 172 | ..... | 125 | ..... | ..... | ..... | ..... | 2,166 |
| | | Total ... | ..... | ..... | 235,417 | ... | ..... | ..... | 17,383 | 62,207 | 17 | 49,800 | ..... | ..... | ..... | 10 | 364,834 |
| 17 | Ratnágiri ... | Rayatwári ... | ..... | ..... | 31,474 | ..... | ..... | ..... | 13,119 | 16,074 | 8 | 5,935 | ..... | ..... | ..... | 88 | 66,698 |
| | | Other Government... | ..... | ..... | 28,585 | ..... | ..... | ..... | 16,578 | 24,203 | ..... | 13,392 | 11 | ..... | ..... | ..... | 82,769 |
| | | Alienated ... | ..... | ..... | 2,753 | ..... | ..... | ..... | 1,033 | 1,272 | ..... | 353 | ..... | ..... | ..... | ..... | 5,411 |
| | | Total ... | ..... | ..... | 62,812 | ..... | ..... | ..... | 30,730 | 41,549 | 8 | 19,680 | 11 | ..... | ..... | 88 | 154,878 |
| 18 | Kánara ... | Rayatwári ... | 1,272 | ..... | 194,169 | ..... | ..... | 16 | ..... | 5,694 | 148 | 528 | ..... | ..... | ..... | ..... | 201,827 |
| | | Other Government... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 1,272 | ..... | 194,169 | ..... | ..... | 16 | ..... | 5,694 | 148 | 528 | ..... | ..... | ..... | ..... | 201,827 |
| | Total, A ... | Rayatwári ... | 7,312,509 | 4,263,380 | 1,418,374 | 1,527,963 | 27,279 | 104,906 | 154,184 | 560,155 | 178,060 | 256,261 | 20,617 | 18,135 | 1,580 | 18,754 | 15,862,157 |
| | | Other Government... | 171,239 | 140,735 | 134,639 | 97,559 | 3,772 | 17,297 | 78,492 | 81,481 | 247 | 51,793 | 24,436 | 797 | 30 | 257 | 802,774 |
| | | Alienated ... | 841,292 | 433,118 | 64,374 | 112,913 | 1,543 | 17,433 | 4,893 | 37,870 | 28,705 | 21,424 | 2,071 | 989 | 268 | 1,389 | 1,568,282 |
| | | Total ... | 8,325,040 | 4,837,233 | 1,617,387 | 1,738,435 | 32,594 | 139,636 | 237,569 | 679,506 | 207,012 | 329,478 | 47,124 | 19,921 | 1,878 | 20,400 | 18,233,213 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | 67,451 | 27,334 | 181,323 | 59,320 | 14,130 | 1,025 | ..... | 1,601 | 24 | 73 | ..... | ..... | ..... | ..... | 352,281 |
| 20 | Hyderabad ... | | 111,184 | 279,346 | 166,642 | 59,407 | 4,816 | 300 | ..... | 59 | 28 | 461 | ..... | ..... | ..... | ..... | 622,243 |
| 21 | Shikárpur ... | | 183,663 | 7,769 | 244,047 | 239,394 | 3,121 | 8 | ..... | 35 | 346 | 46 | ..... | ..... | ..... | 32 | 678,461 |
| 22 | Upper Sind Frontier ... | | 66,697 | 10,048 | 9,216 | 26,970 | 550 | 17 | ..... | 6 | 327 | ..... | ..... | ..... | ..... | 56 | 113,887 |
| 23 | Thar and Párkar ... | | 3,471 | 372,322 | 80,978 | 33,613 | 594 | ..... | ..... | ..... | ..... | 32 | ..... | ..... | ..... | ..... | 491,010 |
| | | Total, B ... | 432,466 | 696,819 | 682,206 | 418,704 | 23,211 | 1,350 | ..... | 1,701 | 725 | 612 | ..... | ..... | ..... | 88 | 2,257,882 |
| | | Grand Total ... | 8,757,506 | 5,534,052 | 2,299,593 | 2,157,139 | 55,805 | 140,986 | 237,569 | 681,207 | 207,737 | 330,090 | 47,124 | 19,921 | 1,878 | 20,488 | 20,491,095 |

# III.—Crops, 1891-92—*continued.*

| No. | District. | | II.—Pulses. Tur (Pigeon Pea), Cajanus Indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram), Phaseolus radiatus. | Math (Kidney Bean), Phaseolus aconitifolius. | Val (large fruited Dolichos); Dolichos lablab. | Chavli (small fruited Dolichos) cattang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Vátáne), Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lakh Lang), Lathyrus sativus. | Field Vetch (Guvár), Cyamopsis psoralioides. | Others. | Total II. | III.—Orchard and Garden Produce. A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | IV.—Drugs and Narcotics. Tobacco (Tambákhu), Nicotiana tabacum. | Bhang, Gánja (Indian Hemp), Cannabis sativa. | Opium (Afu), Papaver somniferum. | Coffee (Káfi, Bund), Coffea Arabica. | Tea (Chaha), Thea sinensis. | Cinchona, Cinchona officinalis. | Others. | Total IV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | Acres. | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwari ... | 981 | 3,317 | 6,268 | 2,121 | 35,540 | 44 | 292 | 228 | ... | ... | ... | 3,859 | ... | 52,650 | 545 | 1,854 | 227 | 951 | 3,577 | 2,416 | ... | ... | ... | ... | ... | 2 | 2,418 |
| | | Other Government | 158 | 7,071 | 8,185 | 2,692 | 20,287 | 46 | 683 | 6,416 | ... | ... | ... | 3,475 | 3 | 49,016 | 343 | 523 | 2,554 | 37 | 3,457 | 356 | ... | ... | ... | ... | ... | ... | 356 |
| | | Alienated ... | 1 | 413 | 575 | 200 | 757 | ... | 32 | 275 | ... | ... | ... | 253 | ... | 2,506 | 17 | 50 | 57 | 1 | 125 | 13 | ... | ... | ... | ... | ... | ... | 13 |
| | | Total ... | 1,140 | 10,801 | 15,028 | 5,013 | 56,584 | 90 | 1,007 | 6,919 | ... | ... | ... | 7,587 | 3 | 104,172 | 905 | 2,427 | 2,838 | 989 | 7,159 | 2,785 | ... | ... | ... | ... | ... | 2 | 2,787 |
| 2 | Kaira ... | Rayatwari ... | 11,585 | 4,125 | 4,570 | 1,199 | 26,796 | 549 | 3,679 | ... | ... | ... | ... | 7,775 | ... | 60,278 | 386 | 617 | 4,814 | 151 | 5,968 | 9,188 | ... | ... | ... | ... | ... | ... | 9,188 |
| | | Other Government | 7,655 | 168 | 606 | 376 | 6,981 | 209 | 279 | ... | ... | ... | ... | 3,192 | ... | 19,466 | 154 | 239 | 407 | 37 | 837 | 11,431 | ... | ... | ... | ... | ... | ... | 11,431 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 19,240 | 4,293 | 5,176 | 1,575 | 33,777 | 758 | 3,958 | ... | ... | ... | ... | 10,967 | ... | 79,744 | 540 | 856 | 5,221 | 188 | 6,805 | 20,619 | ... | ... | ... | ... | ... | ... | 20,619 |
| 3 | Panch Maháls | Rayatwari ... | 2,744 | 43,469 | 2,408 | 5,170 | 2,175 | 75 | 327 | 106 | 707 | ... | ... | 690 | ... | 57,861 | 125 | 150 | 391 | 21 | 687 | 997 | ... | ... | ... | ... | ... | ... | 997 |
| | | Other Government | 1,452 | 3,603 | 1,043 | 1,784 | 1,032 | 43 | 330 | ... | 692 | ... | ... | 170 | ... | 10,149 | 232 | 25 | 25 | 2 | 284 | 193 | ... | ... | ... | ... | ... | ... | 193 |
| | | Alienated ... | 833 | 4,290 | 454 | 456 | 701 | 16 | 111 | ... | 90 | ... | ... | 146 | ... | 7,097 | 55 | 10 | 14 | ... | 79 | 136 | ... | ... | ... | ... | ... | ... | 136 |
| | | Total ... | 5,029 | 51,352 | 3,905 | 7,410 | 3,908 | 134 | 768 | 106 | 1,489 | ... | ... | 1,006 | ... | 75,107 | 412 | 185 | 430 | 23 | 1,050 | 1,326 | ... | ... | ... | ... | ... | ... | 1,326 |
| 4 | Broach ... | Rayatwari ... | 10,570 | 938 | 312 | 17 | 3,758 | 918 | 200 | ... | 1,867 | ... | 43,534 | 274 | ... | 62,388 | 201 | 1,477 | 29,266 | 369 | 31,313 | 3,155 | ... | ... | ... | ... | ... | ... | 3,155 |
| | | Other Government | 8 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 96 | ... | ... | 106 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 10,578 | 938 | 312 | 17 | 3,760 | 918 | 200 | ... | 1,867 | ... | 43,630 | 274 | ... | 62,494 | 201 | 1,477 | 29,266 | 369 | 31,313 | 3,155 | ... | ... | ... | ... | ... | ... | 3,155 |
| 5 | Surat ... | Rayatwari ... | 19,190 | 1,897 | 2,703 | 3,599 | 297 | 31,688 | 873 | ... | 3,711 | 2 | 3,082 | 1,542 | ... | 68,584 | 338 | 1,845 | 1 | 642 | 2,826 | 626 | 3 | ... | ... | ... | ... | ... | 629 |
| | | Other Government | 180 | 2 | 44 | 3 | ... | 149 | 6 | ... | 17 | ... | 12 | 3 | ... | 416 | ... | 5 | ... | 2 | 7 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| | | Alienated ... | 25 | ... | 10 | 20 | 1 | 27 | 1 | ... | ... | ... | 17 | 9 | ... | 110 | ... | 9 | ... | 1 | 10 | 7 | ... | ... | ... | ... | ... | ... | 7 |
| | | Total ... | 19,395 | 1,899 | 2,757 | 3,622 | 298 | 31,864 | 880 | ... | 3,728 | 2 | 3,111 | 1,554 | ... | 69,110 | 338 | 1,859 | 1 | 645 | 2,843 | 634 | 3 | ... | ... | ... | ... | ... | 637 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwari ... | 54,024 | 32,912 | 5,519 | 21,156 | 7,406 | 111 | 1,054 | 61,158 | 2,847 | 696 | 128 | ... | ... | 187,011 | 2,275 | 3,608 | 198 | 2,450 | 8,531 | 6,806 | 9 | ... | ... | ... | ... | ... | 6,815 |
| | | Other Government | 2,331 | 5,352 | ... | 573 | 1 | ... | ... | 311 | 14 | 80 | ... | ... | ... | 8,662 | 4 | 22 | ... | ... | 26 | 48 | ... | ... | ... | ... | ... | ... | 48 |
| | | Alienated ... | 2,144 | 1,712 | 142 | 742 | 79 | 12 | 12 | 255 | 102 | 25 | ... | ... | ... | 5,225 | 457 | 219 | ... | 273 | 949 | 317 | ... | ... | ... | ... | ... | ... | 317 |
| | | Total ... | 58,499 | 39,976 | 5,661 | 22,471 | 7,486 | 123 | 1,066 | 61,724 | 2,963 | 801 | 128 | ... | ... | 200,898 | 2,726 | 3,849 | 198 | 2,723 | 9,506 | 7,171 | 9 | ... | ... | ... | ... | ... | 7,180 |
| 7 | Násik ... | Rayatwari ... | 22,168 | 63,213 | 1,783 | 23,262 | 2,757 | 24 | 36 | 68,037 | 2,383 | 8,334 | 3,653 | ... | ... | 195,650 | 3,369 | 4,065 | 1,322 | 1,821 | 10,577 | 992 | 20 | ... | ... | ... | ... | ... | 1,012 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,986 | 6,313 | 9 | 950 | ... | ... | ... | 2,661 | 147 | 1,047 | 389 | ... | ... | 13,502 | 667 | 356 | 100 | 120 | 1,243 | 69 | ... | ... | ... | ... | ... | ... | 69 |
| | | Total ... | 24,154 | 69,526 | 1,792 | 24,212 | 2,757 | 24 | 36 | 70,698 | 2,530 | 9,381 | 4,042 | ... | ... | 209,152 | 4,036 | 4,421 | 1,422 | 1,941 | 11,820 | 1,061 | 20 | ... | ... | ... | ... | ... | 1,081 |
| 8 | Ahmadnagar ... | Rayatwari ... | 35,345 | 93,436 | 9,683 | 2,575 | 18,734 | 802 | 102 | 41,190 | 1,163 | 243 | 127 | ... | ... | 203,400 | 2,392 | 1,414 | 1,798 | 1,416 | 6,980 | 3,970 | 561 | ... | ... | ... | ... | 1 | 4,535 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 3,764 | 13,430 | 433 | 479 | 1,773 | ... | ... | 4,830 | ... | ... | ... | ... | ... | 24,709 | 109 | 105 | 98 | 177 | 489 | 455 | 115 | ... | ... | ... | ... | ... | 570 |
| | | Total ... | 39,109 | 106,866 | 10,116 | 3,054 | 20,507 | 802 | 102 | 46,020 | 1,163 | 243 | 127 | ... | ... | 228,109 | 2,501 | 1,519 | 1,856 | 1,593 | 7,469 | 4,425 | 676 | ... | ... | ... | ... | 4 | 5,105 |
| 9 | Poona ... | Rayatwari ... | 19,629 | 42,257 | 985 | 3,574 | 26,108 | 3,808 | 315 | 22,189 | 1,809 | 909 | ... | ... | ... | 115,583 | 9,589 | 2,006 | 1,782 | 2,730 | 16,107 | 1,328 | 10 | ... | ... | ... | ... | ... | 1,338 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 4,440 | 7,224 | 226 | 1,023 | 3,153 | 338 | 345 | 5,207 | 193 | 84 | ... | ... | ... | 22,233 | 2,078 | 395 | 216 | 598 | 3,287 | 36 | ... | ... | ... | ... | ... | ... | 36 |
| | | Total ... | 24,069 | 49,481 | 1,211 | 4,597 | 23,261 | 4,146 | 660 | 27,396 | 2,002 | 993 | ... | ... | ... | 137,816 | 11,667 | 2,401 | 1,998 | 3,328 | 19,394 | 1,364 | 10 | ... | ... | ... | ... | ... | 1,374 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwari ... ... | 35,677 | 68,000 | 2,271 | 604 | 22,813 | 46 | 22 | 8,050 | 15 | 29 | 250 | ... | 1 | 137,778 | 2,991 | 1,542 | 429 | 1,346 | 6,308 | 3,215 | 55 | ... | ... | ... | ... | ... | 3,270 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 2,172 | 5,075 | 132 | 7 | 1,377 | 5 | ... | 891 | ... | ... | ... | ... | ... | 9,659 | 230 | 122 | 13 | 66 | 431 | 169 | ... | ... | ... | ... | ... | ... | 169 |
| | | Total ... | 37,849 | 73,075 | 2,403 | 611 | 24,190 | 51 | 22 | 8,941 | 15 | 29 | 250 | ... | 1 | 147,437 | 3,221 | 1,664 | 442 | 1,412 | 6,739 | 3,384 | 55 | ... | ... | ... | ... | ... | 3,439 |
| 11 | Sátára ... | Rayatwari ... ... | 48,378 | 64,283 | 8,806 | 22,782 | 55,697 | 3,192 | 241 | 39,193 | 992 | 440 | ... | ... | 6 | 244,010 | 5,277 | 858 | 1,068 | 1,101 | 8,304 | 7,367 | 316 | ... | 15 | ... | ... | ... | 7,698 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 8,405 | 9,468 | 1,209 | 5,736 | 5,702 | 498 | 72 | 7,031 | 347 | 121 | ... | ... | 41 | 38,630 | 881 | 140 | 232 | 175 | 1,428 | 627 | 1 | ... | 1 | ... | ... | ... | 629 |
| | | Total .. | 56,783 | 73,751 | 10,015 | 28,518 | 61,399 | 3,690 | 313 | 46,224 | 1,339 | 561 | ... | ... | 47 | 282,640 | 6,158 | 998 | 1,300 | 1,276 | 9,732 | 7,994 | 317 | ... | 16 | ... | ... | ... | 8,327 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwari ... ... | 47,513 | 28,509 | 6,246 | 2,095 | 3,714 | 6,586 | 375 | 42,725 | 4,507 | 3,465 | ... | ... | ... | 145,735 | 2,948 | 1,983 | 98 | 2,095 | 7,124 | 17,257 | ... | ... | 45 | ... | ... | ... | 17,302 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 12,823 | 6,918 | 2,823 | 478 | 1,053 | 957 | 65 | 10,899 | 201 | 308 | ... | ... | ... | 36,525 | 1,094 | 329 | 73 | 458 | 1,954 | 3,259 | ... | ... | ... | ... | ... | ... | 3,259 |
| | | Total ... | 60,336 | 35,427 | 9,069 | 2,573 | 4,767 | 7,543 | 440 | 53,624 | 4,708 | 3,773 | ... | ... | ... | 182,260 | 4,042 | 2,312 | 171 | 2,553 | 9,078 | 20,516 | ... | ... | 45 | ... | ... | ... | 20,561 |
| 13 | Bijápur ... | Rayatwari ... ... | 30,141 | 51,827 | 12,591 | 18 | 2,374 | 3,511 | 1,875 | 21,668 | 44 | ... | ... | ... | ... | 124,049 | 1,501 | 1,268 | 1,023 | 2,135 | 5,927 | 1,230 | 3 | ... | ... | ... | ... | ... | 1,233 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 5,585 | 4,014 | 2,230 | ... | 203 | 410 | 199 | 3,496 | 1 | ... | ... | ... | ... | 16,138 | 215 | 169 | 59 | 269 | 712 | 76 | ... | ... | ... | ... | ... | ... | 76 |
| | | Total ... | 35,726 | 55,841 | 14,821 | 18 | 2,577 | 3,921 | 2,074 | 25,164 | 45 | ... | ... | ... | ... | 140,187 | 1,716 | 1,437 | 1,082 | 2,404 | 6,639 | 1,306 | 3 | ... | ... | ... | ... | ... | 1,309 |
| 14 | Dhárwár ... | Rayatwari ... ... | 48,078 | 37,114 | 33,829 | 2,578 | 8,821 | 4,903 | 577 | 43,796 | 495 | 53 | ... | ... | ... | 180,243 | 1,617 | 3,210 | 194 | 3,681 | 8,702 | 798 | ... | ... | ... | ... | ... | ... | 798 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 3,116 | 1,473 | 2,214 | 221 | 480 | 535 | 29 | 2,795 | 97 | 1 | ... | ... | ... | 10,961 | 92 | 412 | ... | 420 | 924 | 34 | ... | ... | ... | ... | ... | ... | 34 |
| | | Total ... | 51,194 | 38,587 | 36,043 | 2,799 | 9,301 | 5,438 | 606 | 46,591 | 591 | 54 | ... | ... | ... | 191,204 | 1,709 | 3,622 | 194 | 4,101 | 9,626 | 832 | ... | ... | ... | ... | ... | ... | 832 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwari ... ... | 5,963 | 1,873 | 338 | 19,260 | ... | 2,062 | 4,273 | 951 | 204 | ... | 39 | ... | ... | 34,968 | 896 | 855 | 33 | 3,293 | 5,077 | 9 | ... | ... | ... | ... | ... | ... | 9 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | ... | 129 | 137 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 53 | ... | ... | 63 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 117 | 21 | 29 | ... | 201 | 251 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 6,016 | 1,873 | 338 | 19,323 | ... | 2,062 | 4,274 | 951 | 204 | ... | 39 | ... | ... | 35,080 | 917 | 892 | 33 | 3,623 | 5,465 | 9 | ... | ... | ... | ... | ... | ... | 9 |
| 16 | Kolába ... | Rayatwari ... ... | 785 | 2,577 | 756 | 2,673 | ... | 5,171 | 53 | 47 | ... | 1 | ... | ... | ... | 12,063 | 93 | 361 | 2 | 2,328 | 2,779 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government... | 1,346 | 312 | 1,590 | 6,074 | ... | 2,907 | 22 | 172 | ... | ... | ... | ... | ... | 12,423 | 3 | 114 | ... | 2 | 119 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | ... | 14 | ... | 34 | ... | 20 | ... | ... | ... | ... | ... | ... | ... | 68 | ... | 3 | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 2,131 | 2,903 | 2,346 | 8,781 | ... | 8,098 | 75 | 219 | ... | 1 | ... | ... | ... | 24,554 | 96 | 478 | 2 | 2,325 | 2,901 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri ... | Rayatwari ... ... | ... | ... | 151 | 1,951 | ... | 525 | 33 | 7,292 | ... | ... | ... | ... | 164 | 10,116 | 11 | 10 | ... | 5,498 | 5,519 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government... | 497 | 56 | 124 | 1,289 | ... | 2,273 | 63 | 1,436 | ... | ... | ... | ... | 284 | 6,021 | 2 | 25 | 611 | 952 | 1,590 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 9 | ... | ... | 121 | ... | ... | 25 | 1,155 | ... | ... | ... | ... | 1 | 1,311 | ... | ... | ... | 427 | 427 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 506 | 56 | 275 | 3,361 | ... | 2,798 | 121 | 9,882 | ... | ... | ... | ... | 449 | 17,448 | 13 | 35 | 611 | 6,877 | 7,536 | ... | ... | ... | ... | ... | ... | ... | ... |
| 18 | Kánara ... | Rayatwari ... ... | 135 | 314 | 989 | 1,773 | ... | 153 | 1,085 | 2,221 | 286 | 2 | ... | ... | ... | 6,958 | 248 | 590 | 2,435 | 17,939 | 21,212 | ... | ... | ... | 21 | ... | ... | 4 | 25 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 135 | 314 | 989 | 1,773 | ... | 153 | 1,085 | 2,221 | 286 | 2 | ... | ... | ... | 6,958 | 248 | 590 | 2,435 | 17,939 | 21,212 | ... | ... | ... | 21 | ... | ... | 4 | 25 |
| | Total, A ... | Rayatwari .. ... | 392,906 | 540,051 | 100,208 | 116,407 | 210,990 | 64,168 | 15,412 | 358,851 | 21,029 | 14,174 | 50,813 | 14,140 | 171 | 1,899,320 | 34,802 | 27,713 | 45,041 | 49,962 | 157,518 | 59,354 | 977 | ... | 81 | ... | ... | 10 | 60,422 |
| | | Other Government... | 13,627 | 16,564 | 11,592 | 12,791 | 28,303 | 5,627 | 1,383 | 8,334 | 723 | 80 | 108 | 6,840 | 287 | 106,259 | 738 | 961 | 3,597 | 1,161 | 6,457 | 12,029 | ... | ... | ... | ... | ... | ... | 12,029 |
| | | Alienated ... ... | 45,356 | 60,344 | 10,457 | 10,530 | 15,279 | 2,818 | 892 | 39,495 | 1,178 | 1,586 | 406 | 408 | 42 | 188,791 | 5,916 | 2,348 | 862 | 3,186 | 12,312 | 5,198 | 116 | ... | 1 | ... | ... | ... | 5,315 |
| | | Total ... | 451,889 | 616,959 | 122,257 | 139,728 | 254,572 | 72,613 | 17,687 | 406,680 | 22,930 | 15,840 | 51,327 | 21,388 | 500 | 2,194,370 | 41,456 | 31,022 | 49,500 | 54,309 | 176,287 | 76,581 | 1,093 | ... | 82 | ... | ... | 10 | 77,766 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | ... | 3,052 | 13,609 | 1,973 | 3,069 | ... | 8 | ... | ... | ... | 11,569 | ... | ... | 33,280 | 1,630 | 2,203 | 877 | 2,032 | 6,742 | 245 | 49 | ... | ... | ... | ... | 1 | 295 |
| 20 | Hyderabad ... ... ... | | ... | 2,969 | 2,464 | 5 | 120 | ... | 1,727 | ... | ... | ... | 15,542 | ... | ... | 22,827 | 2,536 | 4,718 | 14,337 | 4,393 | 25,984 | 6,064 | 21 | ... | ... | ... | ... | ... | 6,085 |
| 21 | Shikárpur... ... ... ... | | ... | 28,393 | 865 | 287 | ... | ... | 9 | ... | 1 | ... | 97,980 | ... | 75 | 127,610 | 2,120 | 5,711 | 500 | 4,628 | 12,959 | 3,053 | 75 | ... | ... | ... | ... | 22 | 3,150 |
| 22 | Upper Sind Frontier ... ... | | ... | 5,402 | 1,036 | 24 | 28 | ... | 143 | ... | ... | ... | 8,293 | ... | 104 | 15,030 | 130 | 1,256 | 4 | 70 | 1,460 | 85 | ... | ... | ... | ... | ... | ... | 85 |
| 23 | Thar and Párkar ... ... | | 4 | ... | 6,612 | ... | ... | ... | 452 | ... | ... | ... | 7 | 67 | ... | 7,142 | 175 | 575 | 146 | 213 | 1,109 | 221 | ... | ... | ... | ... | ... | ... | 221 |
| | | Total, B ... | 4 | 39,816 | 24,586 | 2,289 | 3,217 | ... | 2,339 | ... | 1 | ... | 133,391 | 67 | 179 | 205,889 | 6,591 | 14,463 | 15,864 | 11,336 | 48,254 | 9,668 | 145 | ... | ... | ... | ... | 23 | 9,836 |
| | | Grand Total ... | 451,893 | 656,775 | 146,843 | 142,017 | 257,789 | 72,613 | 20,026 | 406,680 | 22,931 | 15,840 | 184,718 | 21,455 | 679 | 2,400,259 | 48,047 | 45,485 | 65,364 | 65,645 | 224,541 | 86,249 | 1,238 | ... | 82 | ... | ... | 33 | 87,602 |

| No. | District. | V.—Condiments and Spices. | | | | | | | | | | | | | | | | | VI.—Starches. | | | VII.—Sugar. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cardamom (Veldode) Elettaria cardamomum | Chillies (Mirchya), Capsicum frutescens. | Ginger (Ale), Zingiber officinale. | Black Pepper (Miri) Piper nigrum. | Betel-leaves (Pâne), Piper-betel. | Betel-nut (Supâri), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bâlant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jire), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Râi), Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | Arrowroot, Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | Sugarcane (Us. Sherdi), Saccharum officinarum. | Others. | Total VII. |
| | 1 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarât.* | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| 1 | Ahmadabad ... Rayatwâri ... ... ... | ... | 1,550 | 252 | ... | ... | ... | ... | 232 | ... | 1 | 12 | ... | 754 | 4 | 54 | ... | 2,859 | ... | ... | ... | 1,908 | ... | 1,908 |
| | Other Government... ... | ... | 218 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 19 | ... | ... | ... | 237 | ... | ... | ... | 925 | ... | 925 |
| | Alienated ... ... ... | ... | 40 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 41 | ... | ... | ... | 1 | ... | 1 |
| | Total ... | ... | 1,808 | 252 | ... | ... | ... | ... | 233 | ... | 1 | 12 | ... | 773 | 4 | 54 | ... | 3,137 | ... | ... | ... | 2,834 | ... | 2,834 |
| 2 | Kaira ... ... Rayatwâri ... ... ... | ... | 693 | 94 | ... | ... | ... | 11 | 313 | 3 | ... | 329 | ... | 149 | 28 | 67 | 200 | 1,887 | ... | ... | ... | 491 | ... | 491 |
| | Other Government... ... | ... | 266 | 52 | ... | ... | ... | 2 | 6 | ... | ... | 952 | ... | 17 | ... | 87 | 2 | 1,384 | ... | ... | ... | 389 | ... | 389 |
| | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | Total ... | ... | 959 | 146 | ... | ... | ... | 13 | 319 | 3 | ... | 1,281 | ... | 166 | 28 | 154 | 202 | 3,271 | ... | ... | ... | 880 | ... | 880 |
| 3 | Panch Maháls ... Rayatwâri ... ... ... | ... | 489 | 14 | ... | ... | ... | 1 | ... | 68 | 2 | 21 | ... | 28 | ... | 16 | ... | 639 | ... | ... | .. | 284 | ... | 284 |
| | Other Government... ... | ... | 173 | 1 | ... | ... | ... | ... | ... | ... | 10 | ... | ... | 30 | ... | 48 | ... | 262 | ... | ... | ... | 17 | ... | 17 |
| | Alienated ... ... ... | ... | 42 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 42 | ... | ... | ... | 18 | ... | 18 |
| | Total ... | ... | 704 | 15 | ... | ... | ... | 1 | ... | 68 | 12 | 21 | ... | 58 | ... | 64 | ... | 943 | ... | ... | ... | 319 | ... | 319 |
| 4 | Broach ... ... Rayatwâri ... ... ... | ... | 210 | 16 | ... | ... | ... | 15 | ... | 15 | 42 | ... | ... | 17 | 2 | 46 | 6 | 369 | ... | ... | ... | 43 | ... | 43 |
| | Other Government... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | Alienated ... ... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | Total ... | ... | 210 | 16 | ... | ... | ... | 15 | ... | 15 | 42 | ... | ... | 17 | 2 | 46 | 6 | 369 | ... | ... | ... | 43 | ... | 43 |
| 5 | Surat ... ... Rayatwâri ... ... ... | ... | 665 | 161 | ... | ... | ... | 134 | ... | 7 | 6 | ... | 70 | 259 | 15 | 119 | 20 | 1,456 | ... | ... | ... | 5,736 | ... | 5,736 |
| | Other Government... ... | ... | 33 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | 36 | ... | ... | ... | 73 | ... | 73 |
| | Alienated ... ... ... | ... | 33 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 33 | ... | ... | ... | 9 | ... | 9 |
| | Total ... | ... | 731 | 161 | ... | ... | ... | 134 | ... | 7 | 6 | ... | 70 | 262 | 15 | 119 | 20 | 1,525 | ... | ... | ... | 5,818 | ... | 5,818 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... Rayatwâri ... ... ... | ... | 7,812 | 4 | ... | 217 | ... | 68 | 1,124 | 1,392 | 8,420 | ... | 623 | 474 | 269 | 237 | ... | 20,640 | ... | ... | ... | 1,804 | ... | 1,804 |
| | Other Government... ... | ... | 6 | ... | ... | ... | ... | ... | 19 | 38 | ... | ... | 30 | ... | 25 | ... | ... | 118 | ... | ... | ... | ..... | ... | ... |
| | Alienated ... ... ... | ... | 115 | ... | ... | 13 | ... | 31 | 41 | 16 | 81 | ... | 39 | 89 | 115 | ... | ... | 540 | ... | ... | ... | 135 | ... | 135 |
| | Total ... | ... | 7,933 | 4 | ... | 230 | ... | 99 | 1,184 | 1,446 | 8,501 | ... | 692 | 563 | 409 | 237 | ... | 21,298 | ... | ... | ... | 1,939 | ... | 1,939 |
| 7 | Násik ... ... Rayatwâri ... ... ... | ... | 4,012 | 12 | ... | 124 | 1 | 22 | ... | 4 | 11 | ... | ... | 1,172 | 4 | 617 | ... | 5,979 | 11 | 5 | 16 | 7,533 | ... | 7,533 |
| | Other Government... ... | ... | ..... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | Alienated ... ... ... | ... | 362 | 5 | ... | 37 | ... | ... | ... | ... | 3 | ... | 1 | 85 | ... | 51 | ... | 544 | ... | ... | ... | 880 | ... | 880 |
| | Total ... | ... | 4,374 | 17 | ... | 161 | 1 | 22 | ... | 4 | 14 | ... | 1 | 1,257 | 4 | 668 | ... | 6,523 | 11 | 5 | 16 | 8,413 | ... | 8,413 |
| 8 | Ahmadnagar ... Rayatwâri ... ... ... | ... | 6,133 | ... | ... | 416 | ... | 1 | ... | ... | 3 | ... | ... | 31 | 4 | 178 | ... | 6,766 | ... | ... | ... | 3,066 | ... | 3,066 |
| | Other Government... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | Alienated ... ... ... | ... | 557 | ... | ... | 24 | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | 5 | ... | 589 | ... | ... | ... | 187 | ... | 187 |
| | Total ... | ... | 6,690 | ... | ... | 440 | 1 | 1 | ... | ... | 5 | ... | ... | 31 | 4 | 183 | ... | 7,355 | ... | ... | ... | 3,253 | ... | 3,253 |
| 9 | Poona ... ... Rayatwâri ... ... ... | ... | 7,584 | 4 | 34 | 407 | ... | 57 | ... | ... | 680 | ... | 12 | 31 | 93 | 641 | ... | 9,543 | ... | ... | ... | 8,955 | ... | 8,955 |
| | Other Government... ... | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | Alienated ... ... ... | ... | 1,519 | ... | ... | 480 | ... | 3 | ... | ... | 12 | ... | ... | ... | ... | 148 | ... | 2,162 | ... | ... | ... | 1,483 | ... | 1,483 |
| | Total ... | ... | 9,103 | 4 | 34 | 887 | ... | 60 | ... | ... | 692 | ... | 12 | 31 | 93 | 789 | ... | 11,705 | ... | ... | ... | 10,438 | ... | 10,438 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... | 8,217 | ... | ... | 344 | ... | 866 | ... | ... | 256 | ... | ... | ... | ... | 136 | ... | 9,819 | ... | ... | ... | 3,602 | ... | 3,602 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | 489 | ... | ... | ... | 1 | 1 | ... | ... | 9 | ... | ... | ... | ... | ... | ... | 500 | ... | ... | ... | 222 | ... | 222 |
| | | Total ... | 8,706 | ... | ... | 344 | 1 | 867 | ... | ... | 265 | ... | ... | ... | ... | 136 | ... | 10,319 | ... | ... | ... | 3,824 | ... | 3,824 |
| 11 | Sátára ... | Rayatwári ... | 10,728 | 62 | ... | 368 | 4 | 2,303 | 268 | ... | 518 | ... | 23 | 24 | ... | 690 | ... | 14,988 | ... | ... | ... | 11,444 | ... | 11,444 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | 1,994 | 51 | ... | 62 | ... | 463 | 51 | ... | 193 | ... | 4 | ... | ... | 77 | ... | 2,895 | ... | ... | ... | 2,241 | ... | 2,241 |
| | | Total ... | 12,722 | 113 | ... | 430 | 4 | 2,766 | 319 | ... | 711 | ... | 27 | 24 | ... | 767 | ... | 17,883 | ... | ... | ... | 13,685 | ... | 13,685 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 12,457 | ... | 2 | 121 | 5 | 138 | 141 | ... | 608 | ... | ... | 151 | 83 | 1,051 | ... | 14,757 | ... | ... | ... | 8,303 | ... | 8,303 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | 2,952 | ... | ... | 100 | 2 | 59 | 20 | ... | 415 | ... | ... | 5 | 1 | 262 | ... | 3,816 | ... | ... | ... | 2,776 | ... | 2,776 |
| | | Total ... | 15,409 | ... | 2 | 221 | 7 | 197 | 161 | ... | 1,023 | ... | ... | 156 | 84 | 1,313 | ... | 18,573 | ... | ... | ... | 11,079 | ... | 11,079 |
| 13 | Bijápur ... | Rayatwári ... | 2,401 | ... | ... | 59 | ... | 8 | 1 | 1 | 13 | ... | ... | 2 | 1 | 138 | ... | 2,624 | ... | ... | ... | 1,176 | ... | 1,176 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | 285 | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 17 | ... | 304 | ... | ... | ... | 138 | ... | 138 |
| | | Total ... | 2,686 | ... | ... | 60 | ... | 8 | 1 | 1 | 14 | ... | ... | 2 | 1 | 155 | ... | 2,928 | ... | ... | ... | 1,314 | ... | 1,314 |
| 14 | Dhárwár ... | Rayatwári ... | 45,827 | 5 | 1 | 1,281 | 521 | 31 | 5 | 1 | 52 | ... | 26 | 49 | 80 | 1,073 | ... | 48,952 | ... | ... | ... | 5,405 | ... | 5,405 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | 1,721 | ... | ... | 76 | 48 | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | 1,847 | ... | ... | ... | 613 | ... | 613 |
| | | Total ... | 47,548 | 5 | 1 | 1,357 | 569 | 31 | 5 | 1 | 53 | ... | 26 | 49 | 81 | 1,073 | ... | 50,799 | ... | ... | ... | 6,018 | ... | 6,018 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 263 | 256 | ... | 189 | 3 | 39 | ... | ... | 644 | ... | ... | ... | ... | 2 | ... | 1,396 | ... | ... | ... | 1,374 | ... | 1,374 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | 263 | 256 | ... | 189 | 3 | 39 | ... | ... | 644 | ... | ... | ... | ... | 2 | ... | 1,396 | ... | ... | ... | 1,374 | ... | 1,374 |
| 16 | Kolába ... | Rayatwári ... | 59 | ... | ... | 21 | 273 | ... | ... | ... | 150 | ... | ... | ... | ... | ... | ... | 503 | ... | ... | ... | 40 | ... | 40 |
| | | Other Government ... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | ... | ... | 10 | ... | 10 |
| | | Alienated ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | 65 | ... | ... | 21 | 273 | ... | ... | ... | 150 | ... | ... | ... | ... | ... | ... | 509 | ... | ... | ... | 50 | ... | 50 |
| 17 | Ratnágiri ... | Rayatwári ... | 290 | ... | ... | ... | 393 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 683 | ... | ... | ... | 251 | ... | 251 |
| | | Other Government ... | 28 | ... | ... | ... | 437 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 467 | ... | ... | ... | 173 | ... | 173 |
| | | Alienated ... | 8 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 10 | ... | ... | ... | 14 | ... | 14 |
| | | Total ... | 326 | ... | ... | ... | 832 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,160 | ... | ... | ... | 438 | ... | 438 |
| 18 | Kánara ... | Rayatwári ... | 1,217 | 271 | 3 | 1,895 | 265 | 11,531 | 50 | 1 | ... | 4 | ... | ... | ... | 2 | 4 | 84 | 15,327 | ... | ... | ... | 3,403 | ... | 3,403 |
| | | Other Government ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total ... | 1,217 | 271 | 3 | 1,895 | 265 | 11,531 | 50 | 1 | ... | 4 | ... | ... | ... | 2 | 4 | 84 | 15,327 | ... | ... | ... | 3,403 | ... | 3,403 |
| | Total, A ... | Rayatwári ... | 1,217 | 109,661 | 883 | 1,932 | 3,812 | 12,731 | 3,744 | 2,085 | 1,491 | 11,410 | 362 | 754 | 3,141 | 585 | 5,069 | 310 | 159,187 | 11 | 5 | 16 | 64,818 | ... | 64,818 |
| | | Other Government ... | ... | 730 | 53 | ... | ... | 437 | 4 | 25 | 38 | 10 | 952 | 30 | 69 | 25 | 135 | 2 | 2,510 | ... | ... | ... | 1,587 | ... | 1,587 |
| | | Alienated ... | ... | 10,117 | 56 | ... | 793 | 54 | 557 | 113 | 16 | 717 | ... | 44 | 179 | 117 | 560 | ... | 13,323 | ... | ... | ... | 8,717 | ... | 8,717 |
| | | Total ... | 1,217 | 120,508 | 992 | 1,932 | 4,605 | 13,222 | 4,305 | 2,223 | 1,545 | 12,137 | 1,314 | 828 | 3,389 | 727 | 5,764 | 312 | 175,020 | 11 | 5 | 16 | 75,122 | ... | 75,122 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | ... | 43 | ... | ... | ... | ... | 3 | 31 | ... | 234 | 64 | 1 | ... | 8,663 | 38 | 1 | 9,078 | ... | 13 | 13 | 1,201 | ... | 1,201 |
| 20 | Hyderabad... | | ... | 210 | ... | ... | ... | ... | ... | 5 | 1 | 38 | 3 | ... | ... | 742 | 70 | 65 | 1,134 | ... | 8 | 8 | 1,223 | ... | 1,223 |
| 21 | Shikárpur ... | | ... | 230 | ... | ... | ... | ... | ... | 12 | ... | 2,198 | 37 | ... | ... | 164 | 107 | 2 | 2,750 | ... | 19 | 19 | 575 | ... | 575 |
| 22 | Upper Sind Frontier | | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | 209 | ... | ... | ... | ... | 3 | ... | 214 | ... | ... | ... | 8 | ... | 8 |
| 23 | Thar and Párkar ... | | ... | 45 | ... | ... | ... | ... | ... | ... | ... | 72 | ... | ... | ... | 12 | 7 | ... | 136 | ... | 11 | 11 | 27 | ... | 27 |
| | Total, B ... | | ... | 529 | ... | ... | ... | ... | 3 | 49 | 1 | 2,751 | 104 | 1 | ... | 9,581 | 225 | 68 | 13,312 | ... | 51 | 51 | 3,034 | ... | 3,034 |
| | GRAND TOTAL ... | | 1,217 | 121,037 | 992 | 1,932 | 4,605 | 13,222 | 4,308 | 2,272 | 1,546 | 14,888 | 1,418 | 829 | 3,389 | 10,308 | 5,989 | 380 | 188,332 | 11 | 56 | 67 | 78,156 | ... | 78,156 |

## III.—Crops, 189[illegible]-92—*concluded.*

| No. | District. | | VIII.—Oil Seeds. Sesame (Til), Sesamum Indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Erandya), Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Nigeroseed (Khurásni), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogæa. | Cocoanut (Khobare), Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Gulí), Indigofera tinctoria. | Safflower (Kusumba), Carthamus Persicus. | Morinda (Al, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tág), Crotolaria juncea. | Hemp (Ambádi, Sherta), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder Net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | Acres. | Acres. | Acres. | Acres. |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad. | Rayatwári... | 19,095 | 2,314 | 9,989 | 38 | 1,240 | ... | ... | ... | ... | 32,676 | 205 | 983 | ... | ... | 1,188 | 152,770 | 686 | 23 | ... | ... | ... | 153,479 | 245 | 724,839 | 13,273 | 711,566 |
| | | Other Govt. | 13,208 | 435 | 2,891 | 112 | 94 | ... | ... | ... | ... | 16,740 | ... | 218 | ... | ... | 218 | 173,460 | 749 | 73 | ... | .. | ... | 174,282 | 33 | 611,407 | 1,788 | 609,619 |
| | | Alienated ... | 373 | ... | 197 | ... | 3 | ... | ... | ... | ... | 573 | ... | 1 | ... | ... | 1 | 26,513 | ... | ... | ... | ... | ... | 26,513 | ... | 54,815 | 108 | 54,707 |
| | | Total ... | 32,676 | 2,749 | 13,077 | 150 | 1,337 | ... | ... | ... | ... | 49,989 | 205 | 1202 | ... | ... | 1407 | 352,743 | 1,435 | 96 | ... | ... | ... | 354,274 | 278 | 1,391,061 | 15,169 | 1,375,892 |
| 2 | Kaira ... | Rayatwári... | 5,833 | 388 | 5,019 | 1,254 | 8 | ... | ... | ... | ... | 12,497 | 142 | 294 | ... | ... | 436 | 6,752 | 51 | 1,193 | ... | ... | ... | 7,996 | 29 | 556,643 | 11,706 | 544,937 |
| | | Other Govt. | 1,671 | 20 | 539 | 77 | ... | ... | ... | ... | ... | 2,307 | 141 | 53 | ... | ... | 194 | 3,952 | 1 | 550 | ... | ... | ... | 4,503 | 7 | 160,127 | 3,393 | 156,734 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total ... | 7,504 | 403 | 5,558 | 1,331 | 8 | ... | ... | ... | ... | 14,804 | 283 | 347 | ... | ... | 630 | 10,704 | 52 | 1,743 | ... | ... | ... | 12,499 | 29 | 716,770 | 15,099 | 701,671 |
| 3 | Panch Maháls. | Rayatwári... | 18,981 | 174 | 1,816 | 1 | 1,032 | ... | ... | ... | 7,820 | 29,824 | ... | 4 | ... | ... | 4 | 362 | 2,920 | 382 | ... | ... | ... | 3,664 | ... | 290,362 | 54,813 | 235,549 |
| | | Other Govt. | 1,347 | ... | 428 | ... | 30 | ... | ... | ... | 2,179 | 3,984 | ... | ... | ... | ... | ... | 522 | 1,479 | 178 | ... | ... | ... | 2,179 | ... | 70,202 | 5,137 | 65,065 |
| | | Alienated ... | 1,253 | 8 | 189 | ... | 36 | 25 | ... | ... | 730 | 2,241 | ... | ... | .. | ... | ... | 60 | 299 | 50 | ... | ... | ... | 409 | ... | 39,996 | 5,535 | 34,461 |
| | | Total ... | 21,581 | 182 | 2,433 | 1 | 1,098 | 25 | ... | ... | 10,729 | 36,049 | ... | 4 | ... | ... | 4 | 944 | 4,698 | 610 | ... | ... | ... | 6,252 | ... | 400,560 | 65,485 | 335,075 |
| 4 | Broach ... | Rayatwári... | 14,179 | ... | 1,223 | ... | ... | ... | ... | ... | .. | 15,402 | 683 | 12 | ... | ... | 695 | 246,766 | 36 | 1 | ... | ... | ... | 246,803 | 58 | 599,422 | 923 | 598,499 |
| | | Other Govt. | 44 | ... | 6 | ... | ... | ... | ... | ... | .. | 50 | ... | ... | ... | ... | ... | 526 | ... | ... | ... | ... | ... | 526 | ... | 880 | ... | 880 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ..... | ... | .. | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total ... | 14,223 | ... | 1,229 | ... | ... | ... | ... | ... | ... | 15,452 | 683 | 12 | ... | ... | 695 | 247,292 | 36 | 1 | ... | ... | ... | 247,329 | 58 | 600,302 | 923 | 599,379 |
| 5 | Surat ... | Rayatwári... | 3,841 | ... | 28,365 | ... | 2 | 221 | 272 | ... | ... | 32,701 | ... | 22 | ... | ... | 22 | 92,423 | 2,363 | 52 | ... | ... | ... | 94,838 | 93 | 521,24 | 39,147 | 482,102 |
| | | Other Govt. | 7 | ... | 292 | ... | ... | ... | 21 | ... | ... | 320 | ... | ... | ... | ... | ... | 1,372 | 12 | ... | ... | ... | ... | 1,384 | ... | 5,438 | 187 | 5,251 |
| | | Alienated ... | 49 | ... | 74 | ... | ... | ... | 5 | ... | ... | 128 | ... | ... | ... | ... | ... | 379 | 3 | ... | ... | ... | ... | 382 | ... | 3,778 | 21 | 3,757 |
| | | Total ... | 3,897 | ... | 28,731 | ... | 2 | 221 | 298 | ... | ... | 33,149 | ... | 22 | ... | ... | 22 | 94,174 | 2,378 | 52 | .. | ... | .. | 96,604 | 93 | 530,465 | 39,355 | 491,110 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. | Rayatwári.. | 61,343 | 52,796 | 6,094 | 1,478 | ... | 6,347 | 5,378 | ... | ... | 133,431 | 597 | 7 | 97 | ... | 701 | 1,067,172 | 1,571 | 4,351 | ... | ... | 1 | 1,073,095 | 39 | 2,933,432 | 12,884 | 2,920,548 |
| | | Other Govt. | 3,220 | 1,091 | 575 | ... | ... | 1,513 | ... | ... | ... | 6,399 | ... | ... | ... | ... | ... | 3,458 | 757 | 42 | ... | ... | ... | 4,257 | ... | 51,714 | 34 | 51,680 |
| | | Alienated . | 1,373 | 665 | 159 | ... | ... | 179 | 21 | ... | ... | 2,397 | ... | ... | ... | ... | ... | 26,199 | 661 | 210 | ... | ... | ... | 27,070 | ... | 73,828 | 193 | 73,635 |
| | | Total. ... | 65,936 | 54,552 | 6,828 | 1,478 | ... | 8,039 | 5,394 | ... | ... | 142,227 | 597 | 7 | 97 | ... | 701 | 1,096,829 | 2,989 | 4,603 | ... | ... | 1 | 1,104,422 | 39 | 3,058,974 | 13,111 | 3,045,863 |
| 7 | Násik ... | Rayatwári... | 39,625 | 49,966 | 2,399 | 10,354 | ... | 102,967 | 18,983 | ... | ... | 224,294 | ... | ... | ... | ... | ... | 50,099 | 2,807 | 142 | ... | ... | 115 | 53,163 | 151 | 1,937,357 | 16,076 | 1,921,281 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated ... | 1,263 | 1,920 | 85 | 809 | ... | 4,722 | 1,539 | ... | ... | 10,338 | ... | ... | ... | ... | ... | 997 | 227 | ... | ... | ... | ... | 1,224 | ... | 110,728 | 558 | 110,170 |
| | | Total ... | 40,888 | 51,886 | 2,484 | 11,163 | ... | 107,689 | 20,522 | ... | ... | 234,632 | ... | ... | ... | ... | ... | 51,096 | 3,034 | 142 | ... | ... | 115 | 54,387 | 151 | 2,048,085 | 16,634 | 2,031,451 |
| 8 | Ahmadnagar. | Rayatwári... | 10,503 | 17,670 | 178 | 92,320 | 1 | 23,960 | 3,674 | ... | ... | 148,306 | 196 | ... | ... | ... | 196 | 29,225 | 480 | 4,673 | ... | ... | ... | 34,378 | 23 | 2,462,758 | 19,704 | 2,443,054 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated ... | 1,726 | 2,454 | 12 | 11,811 | ... | 369 | 148 | ... | .. | 16,520 | ... | ... | ... | ... | ... | 7,082 | 113 | 1,329 | ... | ... | ... | 8,524 | 3 | 323,741 | 1,733 | 322,008 |
| | | Total ... | 12,229 | 20,124 | 190 | 104,131 | 1 | 24,329 | 3,822 | ... | ... | 164,826 | 196 | ... | ... | ... | 196 | 36,307 | 593 | 6,002 | ... | ... | ... | 42,902 | 26 | 2,786,499 | 21,437 | 2,765,062 |
| 9 | Poona ... | Rayatwári... | 496 | 774 | 293 | 81,847 | ... | 36,847 | 9,970 | ... | 73 | 130,300 | ... | ... | ... | ... | ... | 430 | 319 | 2,202 | ... | ... | 3 | 2,954 | 84 | 1,829,544 | 39,909 | 1,789,635 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated ... | 10 | 61 | 12 | 9,392 | ... | 4,849 | 1,498 | ... | ... | 15,822 | ... | ... | ... | ... | ... | ..... | 35 | 198 | ... | ... | ... | 233 | 1,000 | 312,653 | 6,000 | 306,053 |
| | | Total ... | 506 | 835 | 305 | 91,239 | ... | 41,696 | 11,468 | ... | 73 | 146,122 | ... | ... | ... | ... | ... | 430 | 354 | 2,400 | ... | ... | 3 | 3,187 | 1,084 | 2,141,597 | 45,909 | 2,095,688 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 4,291 | 32,005 | 8,738 | 147,634 | .. | 12,600 | 32,451 | .. | 9 | 237,728 | 35 | .. | 230 | .. | 265 | 2,506 | 122 | 12,157 | .. | .. | 21 | 14,806 | 41 | 2,048,609 | 21,244 | 2,027,365 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Alienated | 469 | 1,435 | 687 | 9,669 | .. | 1,316 | 2,617 | .. | .. | 16,193 | .. | .. | .. | .. | .. | 367 | .. | 531 | .. | .. | .. | 898 | 1 | 151,227 | 1,838 | 149,389 |
| | | Total | 4,760 | 33,440 | 9,425 | 157,303 | ... | 13,916 | 35,068 | ... | 9 | 253,921 | 35 | ... | 230 | ... | 265 | 2,873 | 122 | 12,688 | ... | ... | 21 | 15,704 | 42 | 2,199,836 | 23,082 | 2,176,754 |
| 11 | Sátára | Rayatwári | 211 | 1,813 | 468 | 21,198 | .. | 12,836 | 43,771 | .. | .. | 80,297 | .. | .. | .. | .. | .. | 7,577 | 4,098 | 4,711 | .. | .. | .. | 16,386 | 68 | 1,552,539 | 74,942 | 1,477,597 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Alienated | 8 | 352 | 380 | 2,548 | .. | 2,637 | 11,620 | .. | .. | 17,545 | .. | .. | .. | .. | .. | 324 | 508 | 824 | .. | .. | 2 | 1,658 | 1 | 261,162 | 17,194 | 243,968 |
| | | Total | 219 | 2,165 | 848 | 23,746 | ... | 15,473 | 55,391 | ... | ... | 97,842 | ... | ... | ... | ... | ... | 7,901 | 4,606 | 5,535 | ... | ... | 2 | 18,044 | 69 | 1,813,701 | 92,136 | 1,721,565 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 1,739 | 1,302 | 6,850 | 20,473 | .. | 5,990 | 10,792 | .. | .. | 47,146 | .. | .. | .. | .. | .. | 92,646 | 1,563 | 2,705 | .. | .. | .. | 96,914 | 13 | 1,378,125 | 20,614 | 1,357,511 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Alienated | 321 | 258 | 1,993 | 5,853 | .. | 810 | 2,672 | .. | .. | 11,907 | .. | .. | .. | .. | .. | 14,452 | 660 | 647 | .. | .. | .. | 15,759 | 6 | 303,822 | 2,339 | 301,483 |
| | | Total | 2,060 | 1,560 | 8,843 | 26,326 | ... | 6,800 | 13,464 | ... | ... | 59,053 | ... | ... | ... | ... | ... | 107,098 | 2,223 | 3,352 | .. | ... | ... | 112,673 | 19 | 1,681,947 | 22,953 | 1,658,994 |
| 13 | Bijápur | Rayatwári | 5,675 | 60,202 | 4,516 | 75,425 | .. | 9,942 | 34 | .. | .. | 155,794 | .. | .. | .. | .. | .. | 206,348 | 90 | 4,882 | .. | .. | .. | 211,320 | 10 | 2,432,804 | 2,499 | 2,430,305 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Alienated | 823 | 6,218 | 593 | 6,968 | .. | 923 | 7 | .. | .. | 15,532 | .. | .. | .. | .. | .. | 29,853 | 1 | 556 | .. | .. | .. | 30,410 | 1 | 285,286 | 231 | 285,055 |
| | | Total | 6,498 | 66,420 | 5,109 | 82,393 | ... | 10,865 | 41 | ... | ... | 171,326 | ... | ... | ... | ... | ... | 236,201 | 91 | 5,438 | ... | ... | ... | 241,730 | 10 | 2,718,090 | 2,730 | 2,715,360 |
| 14 | Dhárwár | Rayatwári | 4,027 | 12,632 | 13,346 | 21,516 | 3 | 1,546 | .. | .. | .. | 53,070 | .. | 1 | .. | .. | 1 | 266,751 | 107 | 4,129 | .. | .. | .. | 270,987 | 13 | 1,544,587 | 21,390 | 1,523,197 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Alienated | 227 | 808 | 856 | 575 | .. | 173 | .. | .. | .. | 2,639 | .. | .. | .. | .. | .. | 9,524 | 12 | 239 | .. | .. | .. | 9,775 | 1 | 95,125 | 1,654 | 93,471 |
| | | Total | 4,254 | 13,440 | 14,202 | 22,091 | 3 | 1,719 | ... | ... | ... | 55,709 | ... | 1 | ... | ... | 1 | 276,275 | 119 | 4,368 | ... | ... | ... | 280,762 | 14 | 1,639,712 | 23,044 | 1,616,668 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 3,917 | .. | 2,502 | 3 | 31 | 10,482 | .. | .. | 43 | 16,978 | .. | .. | .. | .. | .. | .... | 3,159 | 2,748 | .. | .. | .. | 5,907 | 16 | 467,202 | 3,230 | 463,972 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | 1,070 | 7 | 1,063 |
| | | Alienated | 2 | .. | .. | .. | .. | 76 | .. | .. | .. | 78 | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | 7,551 | 50 | 7,501 |
| | | Total | 3,919 | ... | 2,502 | 3 | 31 | 10,558 | ... | ... | 43 | 17,056 | ... | ... | ... | ... | ... | ... | 3,159 | 2,748 | ... | ... | ... | 5,907 | 16 | 475,823 | 3,287 | 472,536 |
| 16 | Kolába | Rayatwári | 1,884 | .. | 6 | .. | .. | 790 | .. | .. | 125 | 2,805 | .. | .. | .. | .. | .. | .... | 260 | 165 | .. | .. | .. | 425 | 2 | 236,702 | 6,423 | 230,279 |
| | | Other Govt. | 4,207 | .. | 27 | .. | .. | 108 | .. | .. | .. | 4,342 | .. | .. | .. | .. | .. | .... | 304 | 13 | .. | .. | .. | 317 | .. | 161,800 | 5,211 | 156,589 |
| | | Alienated | 10 | .. | .. | .. | .. | 16 | .. | .. | .. | 26 | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | 2,263 | 20 | 2,243 |
| | | Total | 6,101 | ... | 33 | ... | ... | 914 | ... | ... | 125 | 7,173 | ... | ... | ... | ... | ... | ... | 564 | 178 | ... | ... | ... | 742 | 2 | 400,765 | 11,654 | 389,111 |
| 17 | Ratnágiri | Rayatwári | 5,876 | .. | .. | .. | .. | .. | .. | .. | 1 | 5,877 | .. | .. | .. | .. | .. | .... | 901 | .. | .. | .. | .. | 901 | 136 | 90,181 | 3,253 | 86,928 |
| | | Other Govt. | 4,019 | .. | .. | .. | .. | 150 | .. | .. | 1 | 4,170 | .. | .. | .. | .. | .. | .... | 524 | .. | .. | .. | .. | 524 | .. | 95,714 | 4,634 | 91,080 |
| | | Alienated | 390 | .. | .. | .. | .. | .. | .. | .. | .. | 390 | .. | .. | .. | .. | .. | .... | 151 | .. | .. | .. | .. | 151 | .. | 7,714 | 532 | 7,182 |
| | | Total | 10,285 | ... | ... | ... | ... | 150 | ... | ... | 2 | 10,437 | ... | ... | ... | ... | ... | ... | 1,576 | ... | ... | ... | ... | 1,576 | 136 | 193,609 | 8,419 | 185,190 |
| 18 | Kánara | Rayatwári | 96 | 2 | 311 | .. | .. | 190 | .. | .. | 308 | 907 | .. | .. | .. | .. | .. | .... | 93 | 68 | .. | .. | .. | 161 | 34 | 249,854 | 12,351 | 237,503 |
| | | Other Govt. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Alienated | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .. | .. | .. | .. | .... | .. | .... | .. | .... |
| | | Total | 96 | 2 | 311 | ... | ... | 190 | ... | ... | 308 | 907 | ... | ... | ... | ... | ... | ... | 93 | 68 | ... | ... | ... | 161 | 34 | 249,854 | 12,351 | 237,503 |
| | Total A. | Rayatwári | 201,612 | 232,033 | 92,113 | 473,541 | 2,317 | 224,718 | 125,320 | .. | 8,379 | 1,360,033 | 1,858 | 1,323 | 327 | .. | 3,508 | 2,221,827 | 21,626 | 44,584 | .. | .. | 140 | 2,288,177 | 1,053 | 21,856,209 | 374,381 | 21,481,828 |
| | | Other Govt. | 27,723 | 1,546 | 4,758 | 189 | 124 | 1,771 | 21 | .. | 2,180 | 38,312 | 141 | 271 | .. | .. | 412 | 183,290 | 3,826 | 856 | .. | .. | .. | 187,972 | 40 | 1,158,352 | 20,391 | 1,137,961 |
| | | Alienated | 8,297 | 14,179 | 5,237 | 47,625 | 39 | 16,095 | 20,127 | .. | 730 | 112,329 | .. | 1 | .. | .. | 1 | 115,750 | 2,670 | 4,584 | .. | .. | 2 | 123,006 | 1,013 | 2,033,089 | 38,006 | 1,995,083 |
| | | Total | 237,632 | 247,758 | 102,108 | 521,355 | 2,480 | 242,584 | 145,468 | ... | 11,289 | 1,510,674 | 1,999 | 1,595 | 327 | ... | 3,921 | 2,520,867 | 28,122 | 50,024 | ... | ... | 142 | 2,599,155 | 2,106 | 25,047,650 | 432,778 | 24,614,872 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 2,442 | ... | 37 | ... | 7,561 | ... | ... | ... | 18,285 | 28,325 | 4 | ... | ... | 1 | 5 | 624 | 85 | 1 | ... | ... | ... | 710 | 2 | 431,932 | 28,319 | 403,613 |
| 20 | Hyderabad | | 45,040 | ... | ... | ... | 5,630 | ... | ... | ... | 33,110 | 83,780 | 5,867 | 1 | ... | 8 | 5,876 | 68,620 | 334 | 1 | ... | ... | ... | 68,955 | 19 | 838,134 | 10,345 | 827,789 |
| 21 | Shikárpur | | 14,881 | ... | ... | ... | 38,782 | ... | ... | ... | 33,488 | 87,151 | 1,159 | ... | ... | 449 | 1,608 | 8,164 | 75 | ... | ... | ... | ... | 8,239 | 355 | 922,877 | 171,585 | 751,292 |
| 22 | Upper Sind Frontier | | 36,170 | ... | ... | ... | 27,468 | 11,969 | ... | ... | ... | 75,607 | 60 | ... | ... | ... | 60 | 1,786 | 14 | ... | ... | ... | ... | 1,800 | 106 | 208,257 | 19,915 | 188,342 |
| 23 | Thar and Párkar | | 5,068 | ... | ... | ... | 727 | ... | ... | ... | 16,756 | 22,551 | 285 | ... | ... | ... | 285 | 21,838 | 12 | ... | ... | ... | ... | 21,850 | ... | 544,342 | 5,251 | 539,091 |
| | Total, B. | | 103,601 | ... | 37 | ... | 80,168 | 11,969 | ... | ... | 101,639 | 297,414 | 7,375 | 1 | ... | 458 | 7,834 | 101,032 | 520 | 2 | ... | ... | ... | 101,554 | 482 | 2,945,542 | 235,415 | 2,710,127 |
| | Grand Total | | 341,233 | 247,758 | 102,145 | 521,355 | 82,648 | 254,553 | 145,468 | ... | 112,928 | 1,808,088 | 9,374 | 1,596 | 327 | 458 | 11,755 | 2,621,899 | 28,642 | 50,026 | ... | ... | 142 | 2,700,709 | 2,588 | 27,993,192 | 668,193 | 27,324,999 |

# IV.—Irrigation, 1891-92.

| No. | District. | | Net area cropped. | Area irrigated from Canals. | Area irrigated from other sources. | Total area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct area cropped with irrigation more than once. | Balance net irrigated area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | A.—Bombay Presidency Proper. | | Acres. | | | Acres. | | | | | | | | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| | Ahmadabad ... | Rayatwári ... ... ... | 711,566 | 3,167 | 40,081 | 43,248 | 9,316 | 18,915 | 14,870 | 1,907 | 2,931 | 3,130 | 136 | 51,205 | 7,957 | 43,248 |
| | | Other Government ... ... | 609,619 | 113 | 21,262 | 21,375 | 7,709 | 7,016 | 2,758 | 925 | 1,112 | 180 | 1,675 | 21,375 | ..... | 21,375 |
| | | Alienated ... ... ... | 54,707 | ..... | 2,458 | 2,458 | 1,167 | 816 | 411 | 1 | 55 | 28 | ..... | 2,478 | 20 | 2,458 |
| | | Total ... | 1,375,892 | 3,280 | 63,801 | 67,081 | 18,192 | 26,747 | 18,039 | 2,833 | 4,098 | 3,338 | 1,811 | 75,058 | 7,977 | 67,081 |
| 2 | Kaira ... ... | Rayatwári ... ... ... | 544,937 | 3,869 | 24,223 | 28,092 | 4,043 | 9,221 | 5,290 | 491 | 2,092 | 7,183 | 1,934 | 30,254 | 2,162 | 28,092 |
| | | Other Government ... ... | 156,734 | ..... | 12,345 | 12,345 | 381 | 408 | 906 | 374 | 821 | 9,262 | 496 | 12,618 | 303 | 12,345 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 701,671 | 3,869 | 36,568 | 40,437 | 4,424 | 9,629 | 6,196 | 865 | 2,913 | 16,445 | 2,430 | 42,902 | 2,465 | 40,437 |
| 3 | Panch Máhals. | Rayatwári ... ... ... | 235,549 | ..... | 1,203 | 1,203 | 365 | 122 | 17 | 284 | 237 | 177 | 7 | 1,209 | 6 | 1,203 |
| | | Other Government ... ... | 65,065 | ..... | 653 | 653 | 298 | ..... | ..... | 17 | 326 | 12 | ..... | 653 | ..... | 653 |
| | | Alienated ... ... ... | 34,461 | ..... | 84 | 84 | ..... | ..... | ..... | 18 | 65 | 1 | ..... | 84 | ..... | 84 |
| | | Total ... | 335,075 | ..... | 1,940 | 1,940 | 663 | 122 | 17 | 319 | 628 | 190 | 7 | 1,946 | 6 | 1,940 |
| 4 | Broach ... | Rayatwári ... ... ... | 598,499 | ..... | 672 | 672 | 3 | 4 | 35 | 34 | 422 | 185 | 1 | 684 | 12 | 672 |
| | | Other Government ... ... | 880 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 599,379 | ..... | 672 | 672 | 3 | 4 | 35 | 34 | 422 | 185 | 1 | 684 | 12 | 672 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 482,102 | ..... | 11,183 | 11,183 | 88 | 2,996 | 8 | 5,736 | 1,309 | 1,091 | 1 | 11,229 | 46 | 11,183 |
| | | Other Government ... ... | 5,251 | ..... | 106 | 106 | ..... | ..... | ..... | 73 | 6 | 27 | ..... | 106 | ..... | 106 |
| | | Alienated ... ... ... | 3,757 | ..... | 9 | 9 | ..... | ..... | ..... | 9 | ..... | ..... | ..... | 9 | ..... | 9 |
| | | Total ... | 491,110 | ..... | 11,298 | 11,298 | 88 | 2,996 | 8 | 5,818 | 1,315 | 1,118 | 1 | 11,344 | 46 | 11,298 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 2,920,548 | 11,261 | 25,540 | 36,801 | 11,451 | 1,822 | 3,028 | 1,804 | 9,657 | 10,799 | 198 | 38,759 | 1,958 | 38,801 |
| | | Other Government ... ... | 51,680 | ..... | 7 | 7 | 6 | ..... | ..... | ..... | 1 | ..... | ..... | 7 | ..... | 7 |
| | | Alienated ... ... ... | 73,635 | 251 | 565 | 816 | 155 | 11 | 127 | 135 | 318 | 77 | ..... | 823 | 7 | 816 |
| | | Total ... | 3,045,863 | 11,512 | 26,112 | 37,624 | 11,612 | 1,833 | 3,155 | 1,939 | 9,976 | 10,876 | 198 | 39,589 | 1,965 | 37,624 |
| 7 | Násik ... ... | Rayatwári ... ... ... | 1,921,281 | 24,395 | 40,708 | 65,103 | 19,240 | 3,738 | 11,815 | 7,359 | 13,658 | 13,946 | 1,865 | 71,621 | 6,518 | 65,103 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 110,170 | 1,863 | 3,910 | 5,773 | 1,291 | 304 | 555 | 867 | 1,540 | 1,266 | 95 | 5,918 | 145 | 5,773 |
| | | Total ... | 2,031,451 | 26,258 | 44,618 | 70,876 | 20,531 | 4,042 | 12,370 | 8,226 | 15,198 | 15,212 | 1,960 | 77,539 | 6,663 | 70,876 |
| 8 | Ahmadnagar... | Rayatwári ... ... ... | 2,443,054 | 4,027 | 72,249 | 76,276 | 24,695 | 481 | 29,428 | 2,910 | 13,959 | 10,048 | 1,758 | 83,279 | 7,003 | 76,276 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 322,008 | 64 | 8,428 | 8,492 | 3,546 | 38 | 3,248 | 192 | 1,276 | 723 | 98 | 9,121 | 629 | 8,492 |
| | | Total ... | 2,765,062 | 4,091 | 80,677 | 84,768 | 28,241 | 519 | 32,676 | 3,102 | 15,235 | 10,771 | 1,856 | 92,400 | 7,632 | 84,768 |
| 9 | Poona... ... | Rayatwári ... ... ... | 1,789,635 | 42,801 | 59,165 | 101,966 | 15,329 | 1,412 | 50,987 | 8,738 | 28,421 | 9,035 | 1,952 | 115,874 | 13,908 | 101,966 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 306,053 | 4,730 | 7,018 | 11,748 | 1,608 | 93 | 6,340 | 1,409 | 3,022 | 500 | 147 | 13,119 | 1,371 | 11,748 |
| | | Total ... | 2,095,688 | 47,531 | 66,183 | 113,714 | 16,937 | 1,505 | 57,327 | 10,147 | 31,443 | 9,535 | 2,099 | 128,993 | 15,279 | 113,714 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 2,027,365 | 11,484 | 70,064 | 81,548 | 26,509 | 2,633 | 39,219 | 3,602 | 5,431 | 23,955 | 429 | 101,778 | 20,230 | 81,548 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 149,389 | 385 | 5,171 | 5,556 | 2,126 | 139 | 3,645 | 222 | 417 | 733 | 13 | 7,295 | 1,739 | 5,556 |
| | | Total | 2,176,754 | 11,869 | 75,235 | 87,104 | 28,635 | 2,772 | 42,864 | 3,824 | 5,848 | 24,688 | 442 | 109,073 | 21,969 | 87,104 |
| 11 | Sátára | Rayatwári | 1,477,597 | 6,928 | 76,349 | 83,277 | 16,264 | 5,216 | 21,860 | 11,474 | 13,559 | 27,129 | 898 | 96,400 | 13,123 | 83,277 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 243,968 | 665 | 17,069 | 17,734 | 3,428 | 2,105 | 2,528 | 2,160 | 2,682 | 6,735 | 166 | 19,804 | 2,070 | 17,734 |
| | | Total | 1,721,565 | 7,593 | 93,418 | 101,011 | 19,692 | 7,321 | 24,388 | 13,634 | 16,241 | 33,864 | 1,064 | 116,204 | 15,193 | 101,011 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 1,357,511 | 8,104 | 32,006 | 35,110 | 1,939 | 9,037 | 7,301 | 8,292 | 5,494 | 4,853 | 131 | 37,047 | 1,937 | 35,110 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 301,483 | 2,250 | 8,737 | 10,987 | 938 | 199 | 3,430 | 2,777 | 1,886 | 2,528 | 78 | 11,836 | 849 | 10,987 |
| | | Total | 1,658,994 | 5,354 | 40,743 | 46,097 | 2,877 | 9,236 | 10,731 | 11,069 | 7,380 | 7,381 | 209 | 48,883 | 2,786 | 46,097 |
| 13 | Bijápur | Rayatwári | 2,430,305 | 333 | 10,434 | 10,767 | 1,482 | 834 | 1,948 | 1,176 | 3,540 | 1,945 | 1,023 | 11,948 | 1,181 | 10,767 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 285,055 | 35 | 1,254 | 1,289 | 162 | 90 | 268 | 138 | 518 | 236 | 59 | 1,471 | 182 | 1,289 |
| | | Total | 2,715,360 | 368 | 11,688 | 12,056 | 1,644 | 924 | 2,216 | 1,314 | 4,058 | 2,181 | 1,082 | 13,419 | 1,363 | 12,056 |
| 14 | Dhárwár | Rayatwári | 1,523,197 | 8,944 | 64,748 | 73,692 | 45 | 62,576 | 738 | 5,331 | 3,354 | 2,496 | 210 | 74,750 | 1,058 | 73,692 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 93,471 | 616 | 8,261 | 8,877 | ..... | 7,898 | 1 | 571 | 285 | 133 | ..... | 8,888 | 11 | 8,877 |
| | | Total | 1,616,668 | 9,560 | 73,009 | 82,569 | 45 | 70,474 | 739 | 5,902 | 3,639 | 2,629 | 210 | 83,638 | 1,069 | 82,569 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 463,972 | ..... | 4,623 | 4,623 | ..... | ..... | 286 | 1,338 | 2,611 | 357 | 34 | 4,626 | 3 | 4,623 |
| | | Other Government | 1,063 | ..... | 7 | 7 | ..... | ..... | ..... | ..... | 7 | ..... | ..... | 7 | ..... | 7 |
| | | Alienated | 7,501 | ..... | 50 | 50 | ..... | ..... | ..... | ..... | 50 | ..... | ..... | 50 | ..... | 50 |
| | | Total | 472,536 | ..... | 4,680 | 4,680 | ..... | ..... | 286 | 1,338 | 2,668 | 357 | 34 | 4,683 | 3 | 4,680 |
| 16 | Kolába | Rayatwári | 230,279 | ..... | 2,507 | 2,507 | ..... | ..... | ..... | 36 | 1,853 | 617 | 1 | 2,507 | ..... | 2,507 |
| | | Other Government | 156,589 | ..... | 8 | 8 | ..... | ..... | ..... | ..... | 8 | ..... | ..... | 8 | ..... | 8 |
| | | Alienated | 2,243 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 389,111 | ..... | 2,515 | 2,515 | ..... | ..... | ..... | 36 | 1,861 | 617 | 1 | 2,515 | ..... | 2,515 |
| 17 | Ratnágiri | Rayatwári | 86,928 | ..... | 3,132 | 3,132 | ..... | 1,927 | 77 | 25 | 674 | 434 | ..... | 3,137 | 5 | 3,132 |
| | | Other Government | 91,080 | ..... | 1,572 | 1,572 | ..... | 684 | 157 | 148 | 537 | 52 | ..... | 1,578 | 6 | 1,572 |
| | | Alienated | 7,182 | ..... | 208 | 208 | ..... | 151 | 34 | 10 | 13 | ..... | ..... | 208 | ..... | 208 |
| | | Total | 185,190 | ..... | 4,912 | 4,912 | ..... | 2,762 | 268 | 183 | 1,224 | 486 | ..... | 4,923 | 11 | 4,912 |
| 18 | Kánara | Rayatwári | 237,503 | 2 | 26,170 | 26,172 | ..... | 13,957 | 582 | 3,073 | 6,251 | 2,473 | 1 | 26,337 | 165 | 26,172 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 237,503 | 2 | 26,170 | 26,172 | ..... | 13,957 | 582 | 3,073 | 6,251 | 2,473 | 1 | 26,337 | 165 | 26,172 |
| | Total, A. | Rayatwári | 21,481,828 | 120,315 | 565,057 | 685,372 | 130,769 | 134,891 | 187,489 | 63,610 | 115,453 | 119,853 | 10,579 | 762,644 | 77,272 | 685,372 |
| | | Other Government | 1,137,961 | 113 | 35,960 | 36,073 | 8,394 | 8,108 | 3,821 | 1,537 | 2,818 | 9,533 | 2,171 | 36,382 | 309 | 36,073 |
| | | Alienated | 1,995,083 | 10,859 | 63,222 | 74,081 | 14,421 | 11,844 | 20,587 | 8,509 | 12,127 | 12,960 | 656 | 81,104 | 7,023 | 74,081 |
| | | Total | 24,614,872 | 131,287 | 664,239 | 795,526 | 153,584 | 154,843 | 211,897 | 73,656 | 130,398 | 142,346 | 13,406 | 880,130 | 84,604 | 795,526 |
| | B.– Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 403,613 | 300,885 | 102,728 | 403,613 | 59,320 | 181,323 | 144,918 | 1,201 | 5,865 | 38,428 | 877 | 431,932 | 28,319 | 403,613 |
| 20 | Hyderabad | | 827,789 | 773,667 | 53,575 | 827,242 | 59,113 | 166,642 | 418,809 | 1,223 | 12,793 | 164,548 | 14,337 | 837,465 | 10,223 | 827,242 |
| 21 | Shikárpur | | 751,292 | 614,711 | 136,581 | 751,292 | 239,394 | 244,047 | 322,630 | 575 | 14,836 | 100,895 | 500 | 922,877 | 171,585 | 751,292 |
| 22 | Upper Sind Frontier | | 188,342 | 177,137 | 11,205 | 188,342 | 26,970 | 9,216 | 92,731 | 8 | 1,456 | 77,872 | 4 | 208,257 | 19,915 | 188,342 |
| 23 | Thar and Párkar | | 539,091 | 195,142 | 26 | 195,168 | 33,578 | 80,978 | 39,842 | 27 | 1,027 | 44,759 | 208 | 200,419 | 5,251 | 195,168 |
| | | Total, B. | 2,710,127 | 2,061,542 | 304,115 | 2,365,657 | 418,375 | 682,206 | 1,018,930 | 3,034 | 35,977 | 426,502 | 15,926 | 2,600,950 | 235,293 | 2,365,657 |
| | | Grand Total | 27,324,999 | 2,192,829 | 968,354 | 3,161,183 | 571,959 | 837,049 | 1,230,827 | 76,690 | 166,375 | 568,848 | 29,332 | 3,481,080 | 319,897 | 3,161,183 |

# V.—Agricultural Stock, 1891-92.

| No. | District. | | Cattle and other Quadrupeds. | | | | | | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Plough Cattle. | | Bulls for breeding purposes. | | Oxen and He-Buffaloes for other purposes. | | Milch Cattle. | | Young Stock. | | Total Cattle. | Horses and Ponies. | Sheep. | Goats. | Small. | Large, *i.e.* over two Bullocks. | For riding. | For carrying loads. |
| | | | Oxen. | He-Buffaloes. | Bulls. | Bull Buffaloes. | Oxen. | He-Buffaloes. | Cows. | She-Buffaloes. | Calves. | Buffalo Calves. | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 84,095 | 32 | 375 | 283 | 2,349 | 309 | 52,081 | 60,397 | 30,144 | 30,162 | 260,227 | 3,270 | 29,623 | 13,808 | 40,763 | 18 | 941 | 13,088 |
| | | Other Government | 57,850 | 35 | 253 | 180 | 692 | 140 | 39,201 | 27,635 | 16,730 | 11,520 | 154,236 | 2,745 | 24,050 | 19,621 | 26,084 | ..... | 284 | 7,675 |
| | | Alienated ... | 5,807 | 2 | 15 | 6 | 22 | 5 | 3,671 | 3,067 | 1,485 | 1,408 | 15,488 | 765 | 2,462 | 2,775 | 2,673 | 1 | 50 | 1,103 |
| | | Total ... | 147,752 | 69 | 643 | 469 | 3,063 | 454 | 94,953 | 91,099 | 48,359 | 43,090 | 429,951 | 6,780 | 56,135 | 36,204 | 69,520 | 19 | 1,275 | 21,866 |
| 2 | Kaira ... | Rayatwári ... | 95,129 | 13 | 168 | 342 | 442 | 58 | 40,360 | 82,877 | 37,642 | 59,402 | 316,433 | 1,947 | 5,435 | 30,742 | 52,667 | 2 | 898 | 20,437 |
| | | Other Government | 20,457 | 7 | 24 | 128 | 176 | 24 | 3,556 | 30,601 | 5,899 | 21,896 | 82,768 | 303 | 1,441 | 8,107 | 12,299 | ..... | 445 | 6,922 |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Total ... | 115,586 | 20 | 192 | 470 | 618 | 82 | 43,916 | 113,478 | 43,541 | 81,298 | 399,201 | 2,250 | 6,876 | 38,849 | 64,966 | 2 | 1,341 | 27,359 |
| 3 | Panch Maháls ... | Rayatwári ... | 62,707 | 12 | 399 | 169 | 2,361 | 107 | 46,506 | 14,270 | 43,211 | 8,454 | 178,196 | 1,966 | 3,006 | 19,003 | 31,574 | ..... | 167 | 6,922 |
| | | Other Government | 17,998 | 2 | 121 | 33 | 521 | 13 | 14,545 | 3,869 | 13,450 | 2,449 | 53,001 | 607 | 2,980 | 5,653 | 9,043 | ..... | 55 | 2,042 |
| | | Alienated ... | 7,827 | 7 | 41 | 29 | 20 | 14 | 5,619 | 1,568 | 5,233 | 885 | 21,243 | 141 | 252 | 2,423 | 3,825 | ..... | 3 | 754 |
| | | Total ... | 88,532 | 21 | 561 | 231 | 2,902 | 134 | 66,670 | 19,707 | 61,894 | 11,788 | 252,440 | 2,714 | 6,238 | 27,079 | 44,442 | ..... | 225 | 9,718 |
| 4 | Broach ... | Rayatwári ... | 55,891 | 5 | 64 | 97 | 769 | 44 | 12,263 | 29,573 | 19,876 | 20,835 | 139,417 | 2,586 | 13,620 | 24,413 | 26,724 | ..... | 3,107 | 15,980 |
| | | Other Government | ..... | ..... | ... | .. | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Total ... | 55,891 | 5 | 64 | 97 | 769 | 44 | 12,263 | 29,573 | 19,876 | 20,835 | 139,417 | 2,586 | 13,620 | 24,413 | 26,724 | ..... | 3,107 | 15,980 |
| 5 | Surat ... | Rayatwári ... | 99,100 | 3,832 | 323 | 161 | 7,486 | 669 | 64,226 | 43,669 | 74,914 | 34,224 | 328,604 | 1,562 | 68,249 | 28,503 | 43,391 | 1,038 | 9,139 | 28,069 |
| | | Other Government | 749 | 49 | 1 | 1 | 22 | 4 | 663 | 305 | 824 | 238 | 2,856 | ..... | 303 | 93 | 383 | 7 | 50 | 229 |
| | | Alienated ... | 644 | 7 | 8 | ... | 2 | 1 | 396 | 233 | 436 | 106 | 1,833 | 4 | 42 | 116 | 258 | 2 | 67 | 199 |
| | | Total ... | 100,493 | 3,888 | 332 | 162 | 7,510 | 674 | 65,285 | 44,207 | 76,174 | 34,568 | 333,293 | 1,566 | 68,594 | 28,712 | 49,032 | 1,047 | 9,256 | 28,497 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 328,658 | 1,658 | 3,872 | 695 | 19,436 | 2,359 | 172,331 | 102,559 | 117,502 | 65,044 | 814,159 | 22,222 | 33,291 | 143,873 | 95,689 | 18,564 | 37,197 | 64,854 |
| | | Other Government | 21,451 | 82 | 211 | 44 | 680 | 10 | 17,063 | 2,704 | 11,853 | 1,507 | 55,605 | 447 | 28 | 3,236 | 11,161 | 1 | 302 | 2,667 |
| | | Alienated ... | 9,746 | 34 | 27 | 11 | 769 | 111 | 5,079 | 3,037 | 3,612 | 1,778 | 24,234 | 767 | 1,504 | 4,831 | 2,125 | 1,084 | 815 | 1,645 |
| | | Total ... | 359,850 | 1,774 | 4,110 | 750 | 20,935 | 2,480 | 194,473 | 108,300 | 132,997 | 68,329 | 893,998 | 23,436 | 34,823 | 151,940 | 108,975 | 19,649 | 38,314 | 69,166 |
| 7 | Násik ... | Rayatwári ... | 200,663 | 22,133 | 2,943 | 318 | 9,960 | 510 | 149,502 | 27,560 | 83,040 | 14,368 | 510,997 | 13,201 | 96,920 | 130,210 | 52,527 | 23,301 | 11,421 | 23,976 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | 13,540 | 1,278 | 193 | 12 | 470 | 17 | 8,196 | 1,480 | 4,495 | 845 | 30,526 | 754 | 6,672 | 7,583 | 2,671 | 1,879 | 651 | 1,555 |
| | | Total ... | 214,203 | 23,411 | 3,136 | 330 | 10,430 | 527 | 157,698 | 29,040 | 87,535 | 15,213 | 541,523 | 13,955 | 103,592 | 137,793 | 55,198 | 25,180 | 12,072 | 25,531 |
| 8 | Ahmadnagar ... | Rayatwári ... | 255,013 | 5,056 | 756 | 118 | 6,940 | 918 | 178,539 | 28,865 | 109,873 | 14,618 | 600,696 | 18,879 | 268,242 | 195,491 | 26,436 | 38,747 | 10,995 | 16,299 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | 29,899 | 102 | 56 | 4 | 1,095 | 119 | 18,773 | 2,509 | 12,244 | 1,297 | 66,098 | 2,332 | 33,235 | 20,688 | 3,533 | 4,411 | 1,112 | 1,669 |
| | | Total ... | 284,912 | 5,158 | 812 | 122 | 8,035 | 1,037 | 197,312 | 31,374 | 122,117 | 15,915 | 666,794 | 21,211 | 301,477 | 216,179 | 29,969 | 43,158 | 12,107 | 17,968 |
| 9 | Poona ... | Rayatwári ... | 197,692 | 6,630 | 1,260 | 145 | 6,208 | 957 | 117,718 | 36,251 | 61,912 | 15,655 | 444,428 | 10,144 | 201,559 | 98,032 | 26,653 | 20,952 | 2,805 | 16,539 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated ... | 38,707 | 340 | 79 | 39 | 672 | 88 | 20,756 | 5,654 | 10,568 | 2,728 | 79,631 | 1,472 | 22,005 | 15,122 | 2,936 | 4,550 | 351 | 4,028 |
| | | Total ... | 236,399 | 6,970 | 1,339 | 184 | 6,880 | 1,045 | 138,474 | 41,905 | 72,480 | 18,383 | 524,059 | 11,616 | 223,564 | 113,154 | 29,589 | 25,502 | 3,156 | 20,567 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 185,228 | 7,594 | 913 | 291 | 8,856 | 2,784 | 119,978 | 33,460 | 92,704 | 22,447 | 474,255 | 11,635 | 240,126 | 103,735 | 3,525 | 15,082 | 851 | 13,144 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated | 12,948 | 677 | 65 | 13 | 212 | 114 | 9,104 | 1,948 | 7,153 | 1,360 | 33,594 | 741 | 22,784 | 9,170 | 300 | 1,103 | 26 | 718 |
| | | Total | 198,176 | 8,271 | 978 | 304 | 9,068 | 2,898 | 129,082 | 35,408 | 99,857 | 23,807 | 507,849 | 12,376 | 262,910 | 112,905 | 3,825 | 16,185 | 877 | 13,862 |
| 11 | Sátára | Rayatwári | 184,467 | 12,853 | 477 | 197 | 4,872 | 965 | 109,810 | 60,229 | 69,601 | 35,420 | 478,891 | 11,358 | 311,214 | 73,595 | 17,803 | 18,032 | 693 | 17,885 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated | 33,750 | 2,742 | 91 | 29 | 591 | 131 | 20,177 | 12,006 | 13,272 | 7,135 | 89,924 | 1,617 | 34,589 | 13,035 | 4,637 | 3,122 | 286 | 2,897 |
| | | Total | 218,217 | 15,595 | 568 | 226 | 5,463 | 1,096 | 129,987 | 72,235 | 82,873 | 42,555 | 568,815 | 12,975 | 345,803 | 86,630 | 22,440 | 21,154 | 979 | 20,782 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 139,797 | 30,107 | 660 | 155 | 7,013 | 782 | 82,750 | 63,167 | 70,260 | 39,594 | 434,235 | 5,170 | 159,192 | 68,350 | 51,399 | 9,238 | 413 | 24,565 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated | 28,888 | 3,959 | 60 | 21 | 1,253 | 149 | 14,168 | 12,791 | 13,723 | 8,224 | 83,236 | 1,338 | 43,651 | 17,611 | 6,691 | 2,443 | 73 | 4,021 |
| | | Total | 168,685 | 34,066 | 720 | 176 | 8,266 | 931 | 96,918 | 75,958 | 83,983 | 47,818 | 517,521 | 6,508 | 202,843 | 85,961 | 58,090 | 11,681 | 486 | 28,586 |
| 13 | Bijápur | Rayatwári | 153,872 | 4,446 | 141 | 117 | 4,661 | 1,596 | 79,578 | 46,2 | 109,823 | 40,860 | 441,327 | 8,807 | 154,141 | 123,670 | 37,657 | 8,109 | 130 | 11,876 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated | 20,848 | 645 | 26 | 14 | 454 | 152 | 11,693 | ,439 | 14,539 | 5,369 | 60,179 | 990 | 23,103 | 20,545 | 5,905 | 878 | 26 | 1,254 |
| | | Total | 174,720 | 5,091 | 167 | 131 | 5,115 | 1,748 | 91,271 | 52,672 | 124,362 | 46,229 | 501,506 | 9,797 | 177,244 | 144,215 | 43,562 | 8,987 | 156 | 13,130 |
| 14 | Dhárwár | Rayatwári | 182,369 | 21,364 | 757 | 192 | 10,065 | 1,140 | 91,174 | 66,149 | 112,196 | 49,938 | 535,344 | 4,207 | 114,352 | 85,988 | 84,288 | 4,857 | 618 | 44,105 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated | 14,178 | 2,804 | 21 | 11 | 718 | 41 | 8,577 | 4,948 | 10,415 | 4,003 | 45,716 | 383 | 4,571 | 5,809 | 7,336 | 282 | 40 | 3,043 |
| | | Total | 196,547 | 24,168 | 778 | 203 | 10,783 | 1,181 | 99,751 | 71,097 | 122,611 | 53,941 | 581,060 | 4,590 | 118,923 | 91,797 | 91,624 | 5,139 | 658 | 47,148 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 120,446 | 38,466 | 233 | 35 | 3,197 | 253 | 94,148 | 20,158 | 83,314 | 15,555 | 375,805 | 1,319 | 3,193 | 39,190 | 74,531 | ..... | 4,114 | 23,502 |
| | | Other Government | 559 | 200 | ... | ... | 511 | 9 | 680 | 95 | 338 | 59 | 2,451 | 150 | ..... | 228 | 314 | ..... | 16 | 112 |
| | | Alienated | 2,336 | 339 | ... | ... | 38 | 5 | 901 | 129 | 712 | 89 | 4,519 | 12 | 10 | 460 | 1,248 | ..... | 83 | 620 |
| | | Total | 123,341 | 39,005 | 233 | 35 | 3,746 | 267 | 95,729 | 20,382 | 84,364 | 15,703 | 382,805 | 1,481 | 3,203 | 39,878 | 76,093 | ... | 4,213 | 24,234 |
| 16 | Kolába | Rayatwári | 51,439 | 27,209 | 315 | 69 | 2,945 | 493 | 45,453 | 14,837 | 41,226 | 10,401 | 194,387 | 640 | 775 | 22,116 | 35,854 | ..... | 1,547 | 6,058 |
| | | Other Government | 30,256 | 11,617 | 189 | 51 | 391 | 111 | 25,616 | 6,501 | 20,196 | 4,351 | 99,279 | 101 | 444 | 11,027 | 19,884 | ..... | 119 | 608 |
| | | Alienated | 717 | 357 | ... | ... | 32 | ... | 515 | 151 | 450 | 118 | 2,340 | 2 | ..... | 122 | 505 | ..... | 17 | 85 |
| | | Total | 82,412 | 39,183 | 504 | 120 | 3,368 | 604 | 71,584 | 21,489 | 61,872 | 14,870 | 296,006 | 743 | 1,219 | 33,265 | 56,243 | ... | 1,683 | 6,751 |
| 17 | Ratnágiri | Rayatwári | 28,415 | 8,166 | 28 | 40 | 1,674 | 122 | 12,823 | 4,827 | 9,403 | 2,957 | 68,455 | 55 | 85 | 4,834 | 18,514 | ..... | 36 | 923 |
| | | Other Government | 81,594 | 14,802 | 83 | 12 | 248 | 24 | 49,770 | 14,476 | 53,020 | 11,350 | 225,379 | 211 | 417 | 16,013 | 47,083 | ..... | 105 | 520 |
| | | Alienated | 2,264 | 728 | 15 | 28 | 35 | 783 | 1,315 | 544 | 1,255 | 389 | 7,356 | 7 | 23 | 433 | 1,902 | ..... | 1 | 37 |
| | | Total | 112,273 | 23,696 | 126 | 80 | 1,957 | 929 | 63,908 | 19,847 | 63,678 | 14,696 | 301,190 | 273 | 525 | 21,280 | 67,499 | ... | 142 | 1,480 |
| 18 | Kánara | Rayatwári | 84,765 | 28,955 | 410 | 75 | 7,682 | 1,761 | 85,477 | 29,703 | 57,933 | 11,868 | 308,629 | 367 | 1,927 | 4,815 | 49,438 | ..... | 80 | 6,184 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Alienated | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... |
| | | Total | 84,765 | 28,955 | 410 | 75 | 7,682 | 1,761 | 85,477 | 29,703 | 57,933 | 11,868 | 308,629 | 367 | 1,927 | 4,815 | 49,438 | ... | 80 | 6,184 |
| | Total, A | Rayatwári | 2,509,741 | 218,531 | 14,094 | 3,499 | 106,966 | 15,827 | 1,554,717 | 764,784 | 1,224,574 | 491,802 | 6,904,535 | 119,335 | 1,704,950 | 1,210,368 | 774,433 | 157,940 | 85,150 | 354,406 |
| | | Other Government | 230,914 | 26,794 | 882 | 449 | 3,241 | 335 | 151,094 | 86,186 | 122,310 | 53,370 | 675,575 | 4,564 | 29,668 | 63,978 | 126,251 | 8 | 1,376 | 20,775 |
| | | Alienated | 222,099 | 14,021 | 697 | 217 | 6,383 | 1,730 | 128,940 | 56,504 | 99,622 | 35,734 | 565,947 | 11,325 | 1,94,903 | 120,723 | 46,545 | 19,755 | 3,601 | 23,628 |
| | Grand Total | | 2,962,754 | 259,346 | 15,673 | 4,165 | 116,590 | 17,892 | 1,834,751 | 907,474 | 1,446,506 | 580,906 | 8,146,057 | 135,224 | 1,929,516 | 1,395,069 | 947,229 | 177,703 | 90,127 | 398,809 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi | | | | Not available. | | | | | | | | | | | | | | | |
| 20 | Hyderabad | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur | | | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar | | | | | | | | | | | | | | | | | | | |

# VI.—Sources of Water-supply, 1891-92.

| Number. | Name of District. | Wells, Bhudhis (River-side Wells) and the like. | | | | | | | | Tanks. | | | | | | | | Other Sources. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | For irrigation. | | For drinking supply of human beings, but not for irrigation. | | For cattle and washing and other purposes, but not for irrigation or drinking supply of human beings. | | In disuse. | | For irrigation. | | For drinking supply of human beings solely. | | For cattle and washing and other purposes, but not for irrigation or drinking supply of human beings. | | In disuse. | | For irrigation. | | For drinking supply of human beings solely. | | For cattle and washing and other purposes, but not for irrigation or drinking supply of human beings. | | In disuse. | |
| | | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Fallen in or in disrepair. | Other causes. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Fallen in or in disrepair. | Other causes. | Pakka. | Kacha. | Pakka. | Kacha. | Pakka. | Kacha. | Fallen in or in disrepair. | Other causes. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| | **Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad .. .. .. .. .. | 11,464 | 3,062 | 2,228 | 126 | 578 | 83 | 1,061 | 156 | 9 | 1,114 | 10 | 780 | 3 | 2,229 | 42 | 164 | 24 | 165 | 7 | 30 | .. | 99 | 18 | 53 |
| 2 | Kaira .. .. .. .. .. | 8,100 | 608 | 1,899 | 130 | 375 | 37 | 976 | 140 | 55 | 858 | 8 | 7 | 83 | 3,570 | 8 | 6 | 7 | .. | .. | .. | .. | .. | .. | .. |
| 3 | Panch Mahâls .. .. .. .. | 716 | 649 | 690 | 730 | 110 | 14 | 278 | 52 | .. | 2 | 2 | 26 | 12 | 646 | 38 | 8 | 2 | .. | .. | 76 | .. | 708 | 6 | 8 |
| 4 | Broach .. .. .. .. .. | 695 | 8 | 1,637 | 44 | 1,206 | 93 | 290 | 52 | .. | 81 | .. | 94 | 10 | 1,868 | 23 | 11 | .. | .. | 1 | 10 | .. | 45 | .. | 53 |
| 5 | Surat .. .. .. .. .. | 5,301 | 572 | 5,315 | 869 | 1,088 | 173 | 769 | 175 | 12 | 949 | 8 | 170 | 7 | 648 | 27 | 53 | 4 | 74 | .. | 74 | 8 | 539 | 2 | 51 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh .. .. .. .. .. | 14,985 | 2,112 | 21,614 | 1,721 | 967 | 93 | 2,492 | 648 | 17 | 8 | 28 | 8 | 26 | 81 | 4 | 17 | 67 | 42 | 80 | 350 | 81 | 173 | 166 | 51 |
| 7 | Násik .. .. .. .. .. | 11,034 | 3,184 | 6,039 | 1,028 | 598 | 85 | 1,180 | 327 | 8 | 2 | 39 | 9 | 31 | 73 | 19 | 3 | 207 | 239 | 95 | 137 | 157 | 267 | 11 | 19 |
| 8 | Ahmadnagar .. .. .. .. | 17,689 | 4,589 | 4,576 | 370 | 993 | 49 | 1,694 | 471 | 64 | 71 | 8 | 2 | 4 | 71 | 9 | 13 | 56 | 220 | 1,276 | 239 | 323 | 107 | 19 | 63 |
| 9 | Poona .. .. .. .. .. | 13,943 | 3,837 | 3,146 | 705 | 378 | 81 | 2,047 | 607 | 21 | 31 | 29 | 35 | 36 | 92 | 12 | 30 | 116 | 392 | 722 | 250 | 225 | 381 | 50 | 31 |
| 10 | Sholápur .. .. .. .. .. | 5,913 | 10,519 | 2,139 | 479 | 204 | 135 | 2,050 | 325 | 4 | .. | 5 | 1 | 8 | 188 | 7 | 24 | 15 | 58 | 279 | 18 | 82 | 52 | 17 | 15 |
| 11 | Sátára .. .. .. .. .. | 6,826 | 12,380 | 3,669 | 1,126 | 101 | 97 | 2,248 | 778 | 9 | 11 | 32 | 7 | 29 | 86 | 17 | 7 | 78 | 1,817 | 95 | 415 | 62 | 423 | 29 | 0 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. .. .. .. .. | 1,627 | 6,933 | 3,371 | 2,184 | 281 | 577 | 1,057 | 171 | 7 | 438 | 38 | 123 | 33 | 971 | 50 | 32 | 1 | 165 | 15 | 43 | 3 | 245 | 1 | 4 |
| 13 | Bijápur .. .. .. .. .. | 836 | 4,065 | 1,240 | 1,223 | 306 | 374 | 529 | 354 | 10 | .. | 11 | 88 | 12 | 265 | 6 | 12 | .. | 21 | .. | 138 | .. | 37 | .. | .. |
| 14 | Dhárwár .. .. .. .. .. | 1,473 | 2,940 | 2,101 | 2,044 | 1,709 | 2,134 | 1,812 | 297 | 358 | 2,329 | 313 | 803 | 280 | 2,279 | 149 | 51 | 31 | 56 | 16 | 69 | 27 | 254 | 1 | 10 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána .. .. .. .. .. | 1,616 | 2,429 | 4,307 | 2,556 | 235 | 137 | 134 | 134 | 1 | 9 | 8 | 30 | 33 | 772 | 36 | 312 | 1 | 1 | 18 | 102 | 22 | 664 | 3 | 56 |
| 16 | Kolába .. .. .. .. .. | 1,007 | 296 | 2,413 | 2,543 | 36 | 210 | 195 | 67 | .. | 1 | 14 | 81 | 18 | 590 | 42 | 119 | .. | 13 | 23 | 149 | 23 | 466 | 38 | 59 |
| 17 | Ratnágiri .. .. .. .. .. | 1,756 | 2,729 | 3,725 | 3,225 | 164 | 1,018 | 341 | 314 | 22 | 52 | 130 | 45 | 152 | 69 | 18 | 11 | 3 | 306 | 21 | 214 | 21 | 179 | 10 | 29 |
| 18 | Kánara .. .. .. .. .. | 5,049 | 7,139 | 6,891 | 13,131 | 235 | 1,161 | 1,201 | 871 | 216 | 4,105 | 126 | 791 | 183 | 2,231 | 278 | 270 | 2 | 1,003 | 6 | 173 | 10 | 751 | 21 | 278 |
| | Total ... | 110,030 | 68,051 | 77,000 | 34,234 | 9,623 | 6,551 | 20,354 | 5,939 | 813 | 10,061 | 809 | 3,100 | 960 | 16,729 | 785 | 1,143 | 614 | 4,572 | 2,654 | 2,487 | 1,044 | 5,395 | 392 | 791 |

ACCOMPANIMENT **A** TO RETURN III.

ACCOMPANIMENT A TO RETURN III.

*Details of Kharif and Rabi under Cereals and Pulses, 1891-92.*

| No. | District. | | CLASS I.—(CEREALS.) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári. Sorghum Vulgare. | Bájri, Pennisetum Typhoideum. | Rice. | Wheat. | Barley. | Maize. | Kodra, Paspalum Scrobiculatum. | Rági, Eleusine Coracana. | Rále, Panicum Italicum. | Vari, P. Miliare. | Banti, P. flavidum. | Bhádli, P. pilosum. | Rájgira, Amaranth. | Others. | Total Cereals. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... | Kharif ... | 354,047 | 197,366 | 67,911 | ..... | ..... | 3,769 | 15,239 | 2,945 | ..... | 11,530 | 25,194 | ..... | ..... | ..... | 678,001 |
| | | Rabi ... ... | ..... | ..... | ..... | 169,128 | 17,569 | ..... | ..... | ..... | 266 | ..... | ..... | ..... | 30 | 30 | 187,023 |
| | | Total ... | 354,047 | 197,366 | 67,911 | 169,128 | 17,569 | 3,769 | 15,239 | 2,945 | 266 | 11,530 | 25,194 | ..... | 30 | 30 | 865,024 |
| 2 | Kaira ... ... | Kharif ... | 70,901 | 242,739 | 95,186 | ..... | ..... | 41 | 91,507 | 53,062 | ..... | ..... | 1,670 | ..... | ..... | 2 | 555,108 |
| | | Rabi ... ... | 2,887 | 2 | ..... | 12,525 | 5,661 | 320 | ..... | ..... | 175 | 630 | ..... | ..... | 180 | 1 | 22,381 |
| | | Total ... | 73,788 | 242,741 | 95,186 | 12,525 | 5,661 | 361 | 91,507 | 53,062 | 175 | 630 | 1,670 | ..... | 180 | 3 | 577,489 |
| 3 | Panch Maháls ... | Kharif ... | 4,664 | 50,370 | 55,382 | 12 | ..... | 99,016 | 20,202 | 14,550 | 383 | 3,227 | 14,443 | 438 | 21 | 1,218 | 263,926 |
| | | Rabi ... ... | ..... | ..... | ..... | 14,177 | 1,403 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | ..... | 15,584 |
| | | Total ... | 4,664 | 50,370 | 55,382 | 14,189 | 1,403 | 99,016 | 20,202 | 14,550 | 383 | 3,227 | 14,443 | 438 | 25 | 1,218 | 279,510 |
| 4 | Broach ... ... | Kharif ... | 19,880 | 14,758 | 19,211 | ..... | ..... | 14 | 7,141 | 128 | 9 | 190 | ..... | ..... | 7 | ..... | 61,338 |
| | | Rabi ... ... | 85,416 | ..... | ..... | 92,640 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 178,056 |
| | | Total ... | 105,296 | 14,758 | 19,211 | 92,640 | ..... | 14 | 7,141 | 128 | 9 | 190 | ..... | ..... | 7 | ..... | 239,394 |
| 5 | Surat ... .. | Kharif ... | 117,911 | 7,639 | 106,819 | ..... | 1 | 1 | 36,650 | 13,858 | 4 | 145 | 1,005 | 178 | 2 | 595 | 284,808 |
| | | Rabi... ... | 225 | ..... | ..... | 35,631 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 35,856 |
| | | Total ... | 118,136 | 7,639 | 106,819 | 35,631 | 1 | 1 | 36,650 | 13,858 | 4 | 145 | 1,005 | 178 | 2 | 595 | 320,664 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Kharif ... | 536,587 | 709,749 | 26,386 | ..... | ..... | 2,543 | 5,172 | 11,865 | 315 | 5,745 | 4,142 | 1,765 | 462 | 1,502 | 1,306,233 |
| | | Rabi ... ... | ..... | ..... | ..... | 264,528 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 264,531 |
| | | Total ... | 536,587 | 709,749 | 26,386 | 264,528 | 3 | 2,543 | 5,172 | 11,865 | 315 | 5,745 | 4,142 | 1,765 | 462 | 1,502 | 1,570,764 |
| 7 | Násik ... ... | Kharif ... | 2,450 | 829,747 | 51,420 | ..... | ..... | 1,545 | ..... | 163,634 | 109 | 44,497 | 11 | 3,653 | 109 | 2 | 1,097,177 |
| | | Rabi ... ... | 105,741 | ..... | ..... | 318,992 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 424,733 |
| | | Total ... | 108,191 | 829,747 | 51,420 | 318,992 | ..... | 1,545 | ..... | 163,634 | 109 | 44,497 | 11 | 3,653 | 109 | 2 | 1,521,910 |
| 8 | Ahmadnagar ... | Kharif ... | ..... | 979,220 | 11,721 | ..... | 222 | 585 | 116 | 30,399 | 1,719 | 10,280 | 71 | 5,313 | 513 | 101 | 1,040,260 |
| | | Rabi ... ... | 1,032,672 | ..... | ..... | 253,805 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 521 | 1,286,998 |
| | | Total ... | 1,032,672 | 979,220 | 11,721 | 253,805 | 222 | 585 | 116 | 30,399 | 1,719 | 10,280 | 71 | 5,313 | 513 | 622 | 2,327,258 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... | Kharif ... | 41,873 | 714,281 | 65,823 | ..... | 299 | 1,978 | 241 | 61,579 | 1,045 | 40,671 | 10 | 8,399 | 101 | 1,797 | 938,097 |
| | | Rabi ... | 778,102 | ..... | ..... | 92,658 | 548 | 142 | ..... | ..... | 5 | ..... | ..... | ..... | ..... | 925 | 872,380 |
| | | Total ... | 819,975 | 714,281 | 65,823 | 92,658 | 847 | 2,120 | 241 | 61,579 | 1,050 | 40,671 | 10 | 8,399 | 101 | 2,722 | 1,810,477 |
| 10 | Sholápur ... ... | Kharif ... | ..... | 188,914 | 16,146 | ..... | ..... | 12,457 | 1 | 27 | 868 | 1,044 | ..... | 175 | 31 | 7,770 | 227,433 |
| | | Rabi ... | 1,475,045 | ..... | ..... | 54,778 | 890 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,530,713 |
| | | Total ... | 1,475,045 | 188,914 | 16,146 | 54,778 | 890 | 12,457 | 1 | 27 | 868 | 1,044 | ..... | 175 | 31 | 7,770 | 1,758,146 |
| 11 | Sátára ... ... | Kharif ... | 313,214 | 582,993 | 37,521 | ..... | ..... | 7,423 | 111 | 60,571 | 26,835 | 45,087 | 566 | ..... | 415 | 5,715 | 1,080,451 |
| | | Rabi ... | 224,851 | ..... | ..... | 53,542 | 5,870 | 765 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 285,028 |
| | | Total ... | 538,065 | 582,993 | 37,521 | 53,542 | 5,870 | 8,188 | 111 | 60,571 | 26,835 | 45,087 | 566 | ..... | 415 | 5,715 | 1,365,479 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... | Kharif ... | 432,942 | 147,629 | 112,374 | ..... | ..... | 5,735 | 121 | 49,142 | 72,063 | 28,159 | ..... | ..... | 2 | 120 | 842,287 |
| | | Rabi ... | 334,541 | 5,996 | ..... | 82,960 | 89 | 1,350 | 2 | 44 | 1,382 | ..... | ..... | ..... | ..... | ..... | 426,364 |
| | | Total ... | 767,483 | 147,625 | 112,374 | 82,960 | 89 | 7,085 | 123 | 49,186 | 73,445 | 28,159 | ..... | ..... | 2 | 120 | 1,268,651 |
| 13 | Bijápur ... ... | Kharif ... | 212,562 | 167,806 | 4,497 | ..... | ..... | 1,716 | 20 | 141 | 27,819 | 8,932 | ..... | ..... | 1 | ..... | 423,494 |
| | | Rabi ... | 1,584,377 | ..... | ..... | 144,675 | 5 | ..... | ..... | ..... | 87 | ..... | ..... | ..... | ..... | 3 | 1,729,147 |
| | | Total ... | 1,796,939 | 167,806 | 4,497 | 144,675 | 5 | 1,716 | 20 | 141 | 27,906 | 8,932 | ..... | ..... | 1 | 3 | 2,152;641 |
| 14 | Dhárwár ... ... | Kharif ... | 449,128 | 4,023 | 150,425 | 1 | ..... | 175 | 7 | 42,626 | 69,883 | 31,928 | 1 | ..... | ..... | ..... | 748,197 |
| | | Rabi ... | 143,721 | 1 | ..... | 148,261 | 34 | 31 | ..... | 2 | 3,872 | 628 | ..... | ..... | ..... | ..... | 296,550 |
| | | Total ... | 592,849 | 4,024 | 150,425 | 148,262 | 34 | 206 | 7 | 42,628 | 73,755 | 32,556 | 1 | ..... | ..... | ..... | 1,044,747 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Kharif ... | 31 | ..... | 304,167 | 122 | ..... | 14 | 12,926 | 65,483 | ..... | 26,777 | ..... | ..... | ..... | ..... | 409,520 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 31 | ..... | 304,167 | 122 | ..... | 14 | 12,926 | 65,483 | ... | 26,777 | ..... | ..... | ..... | ..... | 409,520 |
| 16 | Kolába ... ... | Kharif ... | ..... | ..... | 235,417 | ..... | ..... | ..... | 17,383 | 62,207 | 17 | 49,800 | ..... | ..... | ..... | 10 | 364,834 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ..... | 235,417 | ..... | ..... | ..... | 17,383 | 62,207 | 17 | 49,800 | ..... | ..... | ..... | 10 | 364,834 |
| 17 | Ratnágiri ... | Kharif ... | ..... | ..... | 62,812 | ..... | ..... | ..... | 30,730 | 41,549 | 8 | 19,680 | 11 | ..... | ..... | 88 | 154,878 |
| | | Rabi ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ..... | 62,812 | ..... | ..... | ..... | 30,730 | 41,549 | 8 | 19,680 | 11 | ..... | ..... | 88 | 154,878 |
| 18 | Kánara ... ... | Kharif ... | 1,272 | ..... | 180,426 | ..... | ..... | 16 | ..... | 5,694 | 148 | 528 | ..... | ..... | ..... | ..... | 188,084 |
| | | Rabi ... | ..... | ..... | 13,743 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 13,743 |
| | | Total ... | 1,272 | ..... | 194,169 | ..... | ..... | 16 | ..... | 5,694 | 148 | 528 | ..... | ..... | ..... | ..... | 201,827 |
| | Grand Total ... | Kharif ... | 2,557,462 | 4,831,234 | 1,603,644 | 135 | 522 | 137,028 | 237,567 | 679,460 | 201,225 | 328,220 | 47,124 | 19,921 | 1,664 | 18,920 | 10,664,126 |
| | | Rabi ... | 5,767,578 | 5,999 | 13,743 | 1,738,300 | 32,072 | 2,608 | 2 | 46 | 5,787 | 1,258 | ..... | ..... | 214 | 1,480 | 7,569,087 |
| | | Total ... | 8,325,040 | 4,837,233 | 1,617,387 | 1,738,435 | 32,594 | 139,636 | 237,569 | 679,506 | 207,012 | 329,478 | 47,124 | 19,921 | 1,878 | 20,400 | 18,233,213 |

ACCOMPANIMENT A TO RETURN III—*continued.*

*Details of Kharif and Rabi under Cereals and Pulses, 1891-92.*

| No. | District. | | CLASS II.—(PULSES.) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur, Cajanus Indicus. | Gram, Cicer aretinum. | Mug, Phaseolus mungo. | Udid, P. radiatus. | Math, P. aconitifolius. | Vál, Dolichos lablab. | Chavli, D. catiang. | Kulith, D. uniflorus. | Vátáno, Pisum sativum. | Lentil (Masur). | Lákh (Láng) Chickling, vetch. | Field Vetch (Guvár). | Others. | Total Pulses. |
| 1 | 2 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmedabad ... ... ... | Kharif ... | 1,140 | ..... | 15,028 | 5,013 | 56,584 | 90 | 1,007 | 6,919 | ..... | ..... | ..... | 7,587 | 3 | 93,371 |
| | | Rabi ... | ..... | 10,801 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10,801 |
| | | Total ... | 1,140 | 10,801 | 15,028 | 5,013 | 56,584 | 90 | 1,007 | 6,919 | ..... | ..... | ..... | 7,587 | 3 | 104,172 |
| 2 | Kaira... ... ... ... | Kharif ... | 19,145 | ..... | 5,176 | 1,575 | 33,777 | 758 | 3,958 | ..... | ..... | ..... | ..... | 10,967 | ..... | 75,356 |
| | | Rabi ... | 95 | 4,293 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4,388 |
| | | Total ... | 19,240 | 4,293 | 5,176 | 1,575 | 33,777 | 758 | 3,958 | ..... | ..... | ..... | ..... | 10,967 | ..... | 79,744 |
| 3 | Panch Maháls ... ... | Kharif ... | 5,029 | ..... | 3,905 | 7,410 | 3,908 | 134 | 768 | 106 | ..... | ..... | ..... | 1,006 | ..... | 22,266 |
| | | Rabi ... ... | ..... | 51,352 | ..... | ..... | ..... | ..... | ..... | ..... | 1,489 | ..... | ..... | ..... | ..... | 52,841 |
| | | Total ... | 5,029 | 51,352 | 3,905 | 7,410 | 3,908 | 134 | 768 | 106 | 1,489 | ..... | ..... | 1,006 | ..... | 75,107 |
| 4 | Broach ... ... ... | Kharif ... | 2,601 | ..... | 263 | 17 | 3,727 | 184 | 168 | ..... | ..... | ..... | ..... | 268 | ..... | 7,228 |
| | | Rabi... ... | 7,977 | 938 | 49 | ..... | 33 | 734 | 32 | ..... | 1,867 | ..... | 43,630 | 6 | ..... | 55,266 |
| | | Total ... | 10,578 | 938 | 312 | 17 | 3,760 | 918 | 200 | ..... | 1,867 | ..... | 43,630 | 274 | ..... | 62,494 |
| 5 | Surat ... ... ... ... | Kharif ... | 19,196 | ..... | 2,597 | 3,622 | 298 | 800 | 880 | ..... | ..... | ..... | ..... | 1,554 | ..... | 28,947 |
| | | Rabi .. ... | 199 | 1,899 | 160 | ..... | ..... | 31,064 | ..... | ..... | 3,728 | 2 | 3,111 | ..... | ..... | 40,163 |
| | | Total ... | 19,395 | 1,899 | 2,757 | 3,622 | 298 | 31,864 | 880 | ..... | 3,728 | 2 | 3,111 | 1,554 | ..... | 69,110 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | Kharif ... | 58,499 | ..... | 5,661 | 22,471 | 7,486 | 123 | 1,066 | 61,724 | ..... | 801 | ..... | ..... | ..... | 157,831 |
| | | Rabi... ... | ..... | 39,976 | ..... | ..... | ..... | ..... | ..... | ..... | 2,963 | ..... | 128 | ..... | ..... | 43,067 |
| | | Total ... | 58,499 | 39,976 | 5,661 | 22,471 | 7,486 | 123 | 1,066 | 61,724 | 2,963 | 801 | 128 | ..... | ..... | 200,898 |
| 7 | Násik ... ... ... ... | Kharif ... | 24,154 | ..... | 1,792 | 24,212 | 2,757 | 24 | 36 | 70,698 | ..... | ..... | ..... | ..... | ..... | 123,673 |
| | | Rabi... ... | ..... | 69,526 | ..... | ..... | ..... | ..... | ..... | ..... | 2,530 | 9,381 | 4,042 | ..... | ..... | 85,479 |
| | | Total ... | 24,154 | 69,526 | 1,792 | 24,212 | 2,757 | 24 | 36 | 70,698 | 2,530 | 9,381 | 4,042 | ..... | ..... | 209,152 |
| 8 | Ahmadnagar ... ... ... | Kharif ... | 39,109 | ..... | 10,116 | 3,054 | 20,507 | 802 | 102 | 46,020 | ..... | ..... | 127 | ..... | ..... | 119,837 |
| | | Rabi... ... | ..... | 106,866 | ..... | ..... | ..... | ..... | ..... | ..... | 1,163 | 243 | ..... | ..... | ..... | 108,272 |
| | | Total ... | 39,109 | 106,866 | 10,116 | 3,054 | 20,507 | 802 | 102 | 46,020 | 1,163 | 243 | 127 | ..... | ..... | 228,109 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... ... ... | Kharif ... | 24,069 | ..... | 1,211 | 4,597 | 23,261 | 1,512 | 660 | 27,396 | 33 | 38 | ..... | ..... | ..... | 82,777 |
| | | Rabi ... ... | ..... | 49,481 | ..... | ..... | ..... | 2,634 | ..... | ..... | 1,969 | 955 | ..... | ..... | ..... | 55,039 |
| | | Total ... | 24,069 | 49,481 | 1,211 | 4,597 | 23,261 | 4,146 | 660 | 27,396 | 2,002 | 993 | ... | ... | ... | 137,816 |
| 10 | Sholápur ... ... ... | Kharif ... | 37,849 | ..... | 2,403 | 611 | 24,190 | ..... | 22 | 8,941 | ..... | ..... | ..... | ..... | 1 | 74,017 |
| | | Rabi ... ... | ..... | 73,075 | ..... | ..... | ..... | 51 | ..... | ..... | 15 | 29 | 250 | ..... | ..... | 73,420 |
| | | Total ... | 37,849 | 73,075 | 2,403 | 611 | 24,190 | 51 | 22 | 8,941 | 15 | 29 | 250 | ... | 1 | 147,437 |
| 11 | Sátára... ... ... ... | Kharif ... | 56,783 | ..... | 10,015 | 28,518 | 61,399 | 3,690 | 313 | 46,224 | ..... | ..... | ..... | ..... | 47 | 206,989 |
| | | Rabi... ... | ..... | 73,751 | ..... | ..... | ..... | ..... | ..... | ..... | 1,339 | 561 | ..... | ..... | ..... | 75,651 |
| | | Total ... | 56,783 | 73,751 | 10,015 | 28,518 | 61,399 | 3,690 | 313 | 46,224 | 1,339 | 561 | ... | ... | 47 | 282,640 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | Kharif ... | 59,813 | ..... | 8,854 | 2,573 | 4,543 | 1,156 | 440 | 53,609 | ..... | 1 | ..... | ..... | ..... | 130,989 |
| | | Rabi ... ... | 523 | 35,427 | 215 | ..... | 224 | 6,387 | ..... | 15 | 4,708 | 3,772 | ..... | ..... | ..... | 51,271 |
| | | Total ... | 60,336 | 35,427 | 9,069 | 2,573 | 4,767 | 7,543 | 440 | 53,624 | 4,708 | 3,773 | ... | ... | ... | 182,260 |
| 13 | Bijápur ... ... ... | Kharif ... | 35,017 | ..... | 14,763 | 18 | 2,567 | 3,120 | 2,069 | 24,804 | ..... | ..... | ..... | ..... | ..... | 82,358 |
| | | Rabi ... ... | 709 | 55,841 | 58 | ..... | 10 | 801 | 5 | 360 | 45 | ..... | ..... | ..... | ..... | 57,829 |
| | | Total ... | 35,726 | 55,841 | 14,821 | 18 | 2,577 | 3,921 | 2,074 | 25,164 | 45 | ... | ... | ... | ... | 140,187 |
| 14 | Dhárwár ... ... ... | Kharif ... | 51,193 | 135 | 32,771 | 2,236 | 9,300 | 4,117 | 605 | 40,520 | ..... | ..... | ..... | ..... | ..... | 140,877 |
| | | Rabi ... | 1 | 38,452 | 3,272 | 563 | 1 | 1,321 | 1 | 6,071 | 591 | 54 | ..... | ..... | ..... | 50,327 |
| | | Total ... | 51,194 | 38,587 | 36,043 | 2,799 | 9,301 | 5,438 | 606 | 46,591 | 591 | 54 | ... | ... | ... | 191,204 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | Kharif ... | 5,923 | 155 | 258 | 19,315 | ..... | 1,493 | 4,274 | 951 | 204 | ..... | 39 | ..... | ..... | 32,6 |
| | | Rabi ... ... | 93 | 1,718 | 80 | 8 | ..... | 569 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2,4 |
| | | Total ... | 6,016 | 1,873 | 338 | 19,323 | ... | 2,062 | 4,274 | 951 | 204 | ... | 39 | ... | ... | 35,0 |
| 16 | Kolába ... ... ... | Kharif ... | 423 | ..... | ..... | 3,336 | ..... | ..... | ..... | 48 | ..... | 1 | ..... | ..... | ..... | 3,8 |
| | | Rabi... ... | 1,708 | 2,903 | 2,346 | 5,445 | ..... | 8,098 | 75 | 171 | ..... | ..... | ..... | ..... | ..... | 20,7 |
| | | Total ... | 2,131 | 2,903 | 2,346 | 8,781 | ... | 8,098 | 75 | 219 | ... | 1 | ... | ... | ... | 24,5 |
| 17 | Ratnágiri ... ... ... | Kharif ... | 506 | 56 | 275 | 3,361 | ..... | 2,798 | 121 | 9,882 | ..... | ..... | ..... | ..... | 449 | 17,4 |
| | | Rabi... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 506 | 56 | 275 | 3,361 | ... | 2,798 | 121 | 9,882 | ... | ... | ... | ... | 449 | 17,448 |
| 18 | Kánara ... ... ... | Kharif ... | 135 | 7 | 9 | 224 | ..... | 17 | 8 | 1,868 | ..... | ..... | ..... | ..... | ..... | 2,268 |
| | | Rabi... ... | ..... | 307 | 980 | 1,549 | ..... | 136 | 1,077 | 353 | 286 | 2 | ..... | ..... | ..... | 4,690 |
| | | Total ... | 135 | 314 | 989 | 1,773 | ... | 153 | 1,085 | 2,221 | 286 | 2 | ... | ... | ... | 6,958 |
| | Grand Total ... | Kharif ... | 440,584 | 353 | 115,097 | 132,163 | 254,304 | 20,818 | 16,497 | 399,710 | 237 | 841 | 166 | 21,382 | 500 | 1,402,652 |
| | | Rabi ... ... | 11,305 | 616,606 | 7,160 | 7,565 | 268 | 51,795 | 1,190 | 6,970 | 22,693 | 14,999 | 51,161 | 6 | ..... | 791,718 |
| | | Total ... | 451,889 | 616,959 | 122,257 | 139,728 | 254,572 | 72,613 | 17,687 | 406,680 | 22,930 | 15,840 | 51,327 | 21,388 | 500 | 2,194,370 |

## ACCOMPANIMENT B TO RETURN III.

*Number of Principal Fruit-bearing Trees, 1891-92.*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|
| | **A.—BOMBAY PRESIDENCY PROPER.** | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 50,724 | 9,732 | ... | 10 | 46 | 2,713 |
| 2 | Kaira ... ... ... | 222,121 | 23,168 | ... | ..... | 15 | .. |
| 3 | Panch Mahále ... ... | 41,034 | 5,985 | ... | ..... | 129,921 | .... |
| 4 | Broach ... ... ... | 24,911 | 5,945 | ... | 112 | 33,403 | 993 |
| 5 | Surat ... ... ... | 178,365 | 72,952 | 3,502 | 7,323 | 72,758 | 616,318 |
| | Total ... | 517,095 | 117,782 | 3,502 | 7,445 | 236,143 | 620,024 |
| | *II.—Deccan.* | | | | | | |
| 6 | Khándesh ... ... | 194,104 | 13,772 | 9 | 135 | 317 | ... |
| 7 | Násik ... ... ... | 146,420 | 7,503 | 45 | 198 | 12 | 42,303 |
| 8 | Ahmadnagar ... ... | 58,301 | 9,017 | 14 | 284 | ... | 722 |
| 9 | Poona ... ... ... | 111,301 | 8,592 | 730 | 1,186 | 8,880 | ... |
| 10 | Sholápur ... ... | 35,157 | 7,806 | 1 | 115 | 2 | 50,401 |
| 11 | Sátára ... ... ... | 165,876 | 11,297 | 9,434 | 4,925 | 281 | ... |
| | Total ... | 711,159 | 57,987 | 10,233 | 6,843 | 9,492 | 93,426 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 121,268 | 24,084 | 10,766 | 2,045 | 37 | 43,508 |
| 13 | Bijápur ... ... ... | 72,973 | 25,446 | 52 | 2,179 | 107 | 421,945 |
| 14 | Dhárwár ... ... | 171,924 | 56,634 | 8,344 | 66,896 | 3 | 526,453 |
| | Total ... | 366,165 | 106,164 | 19,162 | 71,120 | 147 | 991,906 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 157,619 | 14,783 | 2,898 | 88,558 | 68,846 | 12,447 |
| 16 | Kolába ... ... ... | 89,455 | 5,125 | 4,892 | 90,520 | 19,850 | 30 |
| 17 | Ratnágiri ... ... | 164,476 | 4,731 | 62,657 | 264,371 | ... | ... |
| 18 | Kánara ... ... ... | 123,959 | 10,964 | 89,857 | 990,324 | ... | ... |
| | Total ... | 535,509 | 35,603 | 160,304 | 1,433,775 | 88,696 | 12,477 |
| | Total, A ... | 2,129,928 | 317,536 | 193,201 | 1,519,181 | 334,478 | 1,717,833 |
| | **B.—SIND.** | | | | | | |
| 19 | Karáchi ... ... ... | 38,403 | 26 | ... | 1,119 | ... | 596 |
| 20 | Hyderabad ... ... | 92,553 | 38 | ... | ..... | ... | 2,412 |
| 21 | Shikárpur ... ... | 58,169 | 18 | ... | ..... | ... | 150,119 |
| 22 | Upper Sind Frontier ... | 2,540 | 1 | ... | ..... | ... | 872 |
| 23 | Thar and Párkar ... | 6,811 | ... | ... | ..... | ... | 3 |
| | Total, B ... | 198,476 | 83 | ... | 1,119 | ... | 154,002 |
| | GRAND TOTAL ... | 2,328,404 | 317,619 | 193,201 | 1,520,300 | 334,478 | 1,871,835 |

# STATISTICS.

## B.—RAINFALL.

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | 1st January—10th April. |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini ... ... | 11th April—24th April. |
| | Bharani ... ... | 25th April—8th May. |
| | Krittika ... ... | 9th May—22nd May. |
| | Rohini ... ... | 23rd May—4th June. |
| Monsoon-Kharif— | | |
| 5th June to 14th August . | Mrig... ... ... | 5th June—19th June. |
| | Árdra ... ... | 20th June—3rd July. |
| | Punarvasu ... ... | 4th July—17th July. |
| | Pushya ... ... | 18th July—31st July. |
| | A'shlesha ... ... | 1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct . | Magha ... ... | 15th August—27th August |
| | Purva ... ... | 28th August—10th September. |
| | Uttara ... ... | 11th September—24th September. |
| | Hast ... ... | 25th September—7th October. |
| | Chitra ... ... | 8th October—21st October. |
| Late Rains— | | |
| 22nd Oct. to 30th Nov ... | Sváti... ... ... | 22nd October—3rd November. |
| | Vishákha ... ... | 4th November—17th November. |
| | Anurádha ... ... | 18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1886, except for very few stations. The rainy days are compared with last year only.

The anna valuation given in the remarks is on the basis of 16 annas representing an average crop.

## Synopsis of Rainfall Summary, 1891-92.

| District. | Kharif. | | Rabi. | | General Remarks as to Rain. |
|---|---|---|---|---|---|
| | Rain. | Harvest. | Rain. | Harvest. | |
| West Khándesh ... | Late, but favourable. | Fair ... ... | Good for sowing, but scant afterwards. | Fair ... ... | Below average. |
| East Khándesh ... | Seasonable and sufficient. | Good ... ... | Seasonable ... | Good ... ... | Above or up to average. |
| Násik ... ... | Late, but favourable. | Fair ... ... | Seasonable for sowing, but deficient at end. | Fair ... ... | Below average. |
| Ahmadnagar ... | Late for sowing. Prolonged breaks. | Poor ... ... | Deficient ... | Poor .. ... | Do. |
| Poona ... ... | Late and deficient. | Fair in west. Poor elsewhere. | Good for sowing; late rains very scant. | Poor ... ... | Do. |
| Sholápur ... ... | Do. ... | Poor ... ... | Do. ... | Fair in Bársi; poor elsewhere. | Do. |
| Sátára ... ... | Seasonable in west; scant elsewhere, especially in north-east. | Fair in west and centre. Poor elsewhere. | Do. ... | Poor ... ... | Do. |
| Belgaum ... ... | Good in south-west; scant elsewhere. | Fair in south-west, poor elsewhere. | Do. ... | Fair in south-west; poor elsewhere. | Below or up to average. |
| Bijápur ... ... | Scant with prolonged breaks. | Very poor ... | Do. ... | Failure or very poor. | Much below average. |
| Dhárwár ... ... | Fair except in north-east. Breaks too prolonged. | Fair, except in north-east, where poor. | Do. ... | Do. ... | Below or up to average. |
| Kánara ... ... | Seasonable ... | Fair ... ... | Seasonable ... | Fair ... ... | Do. |
| Ratnágiri ... | Do. ... | Do. ... | Rather deficient. | Do. ... ... | Below average. |
| Kolába ... ... | Do. ... | Do. ... | Do. ... | Do. ... ... | Do. |
| Thána ... ... | Late, but favourable. | Do. ... | Do. ... | Do. ... ... | Below or up to average. |
| Surat... ... ... | Seasonable, but Pushya excessive. | Do. ... | Do. ... | Do. ... ... | Above average. |
| Broach ... ... | Do. ... | Do. ... | Do. ... | Do. ... ... | Do. |
| Kaira... ... ... | Seasonable, but deficient for rice. | Do. ... | Do. ... | Do. ... ... | Below average. |
| Panch Maháls ... | Late, but favourable. | Do. ... | Do. ... | Fair in east; poor elsewhere. | Do. |
| Ahmadabad... ... | Do. deficient for rice. | Do. .. | Closed soon ... | Poor ... ... | Do. |

## West Khándesh, 1891.

| Rain Periods. | Dhulia. | | Pimpalner. | | Nandurba'r. | | Nava'pur. | | Taloda. | | Sha'ha'da. | | Shirpur. | | Sindkheda. | | Amalner. | | Pa'rola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | 0·12 | 1 | ... | ... | ... | ... | 0·06 | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... | 18·65 | 24 | 14·59 | 19 | 17·39 | 27 | 31·92 | 29 | 21·35 | 28 | 18·17 | 26 | 15·51 | 29 | 12·56 | 24 | 18·19 | 20 | 19·65 | 24 |
| Monsoon-Rabi ... | 5·93 | 10 | 5·34 | 14 | 9·09 | 10 | 17·93 | 22 | 8·10 | 14 | 6·93 | 9 | [illegible] | 12 | 6·12 | 11 | 9·76 | 15 | 9·48 | 16 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 24·58 | 34 | 19·93 | 33 | 26·48 | 37 | 49·97 | 52 | 29·45 | 42 | 20·10 | 35 | 21·77 | 41 | 18·68 | 35 | 27·95 | 35 | 29·13 | 40 |
| Average ... | 25·79 | 37 | 27·42 | 34 | 32·67 | 55 | ... | 64 | 34·96 | 58 | 31·56 | 48 | 27·56 | 42 | 22·95 | 27 | 28·05 | 43 | 32·08 | 53 |

*General characteristics.*—A hilly and rugged tract, except where the wide black-soil plains extend on either side of the Tápti and its tributaries. Rainfall very heavy in the Dángs.

*Remarks.*—Rainfall throughout below average. No rain in the ante-monsoon period. Regular monsoon set in very late; kharif sowings partially commenced at end of June. July rain was generally seasonable for kharif sowings, though heavy Pushya rain necessitated resowing in places. In August rain fell in the beginning and at end of month, the intervening break being very beneficial, allowing weeding and hoeing. In September rain fell in light showers at intervals, and was on the whole favourable for standing kharif and for preparing rabi lands. Hast showers in first week of October, though light, were generally sufficient for rabi sowing. No rain fell after Hast, though a closing shower was desirable, especially for wheat in places. Season fair on the whole. Outturn of both kharif and rabi crops estimated at 8—16 annas.

## East Khándesh, 1891.

| Rain Periods. | Cha'lisgaon. | | Pa'chora. | | Bhadgaon. | | Erandol. | | Chopda. | | Jalgaon. | | Ja'mner. | | Bhusa'val. | | Edala'ba'd. | | Sa'vda. | | Ya'val. | | Ra'ver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy day | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | 0·72 | 1 | ... | ... | 0·08 | ... | 0·50 | 2 | 0·65 | 1 | 0·46 | 1 | 0·34 | 1 | 0·53 | 2 | 0·60 | 2 |
| Ante-Monsoon ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·01 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... | 16·71 | 23 | 16·37 | 21 | 20·22 | 20 | 25·99 | 32 | 26·24 | 30 | 32·22 | 30 | 19·23 | 24 | 18·85 | 24 | 16·42 | 21 | 16·90 | 23 | 16·88 | 23 | 15·13 | 21 |
| Monsoon-Rabi ... | 17·12 | 18 | 13·37 | 13 | 8·96 | 15 | 10·78 | 17 | 14·40 | 14 | 16·17 | 13 | 15·24 | 16 | 15·06 | 14 | 15·57 | 18 | 12·72 | 15 | 9·30 | 13 | 13·92 | 17 |
| Late Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 33·83 | 41 | 29·74 | 34 | 29·18 | 35 | 37·49 | 50 | 40·65 | 44 | 48·47 | 43 | 34·97 | 42 | 34·56 | 39 | 32·45 | 40 | 29·96 | 39 | 26·71 | 38 | 29·65 | 40 |
| Average ... | 29·70 | 44 | 29·51 | 48 | 31·29 | 48 | 31·12 | 70 | 31·58 | 49 | 33·42 | 53 | 34·84 | 50 | 35·18 | 40 | 28·78 | 39 | 28·95 | 38 | 34·44 | 40 | 33·56 | 35 |

*General characteristics.*—In the north, high hills of the Sátpudas. The southern and western portions are also hilly, but the hills less high, and continuous. Drainage by the Tápti, the Girna and the Purna. Rainfall larger than in the West Khándesh, but less certain.

*Remarks.*—Rainfall above or up to average. Ante-monsoon showers absent. Monsoon set in with heavy showers at end of June, and kharif sowings commenced. July rain sufficient for kharif sowings, and excessive for seedlings in places, being very heavy in Pushya. A'shlesha rain in first week of August was again excessive for young crops already suffering from too much moisture, especially in western tálukas (Erandol, Chopda and Jalgaon). A clear fortnight's break followed, which was highly beneficial, and allowed weeding. Rainfall at end of August and in September was generally favourable for all crops except cotton, for which rain of Magha and Hast excessive in places. Hast showers also fell in the beginning of October, generally sufficient for rabi sowing. No rain fell later, neither was it required. Season on the whole good. Kharif outturn from 8—18 annas and rabi 8—16 annas. In Ráver Petha rabi crop a bumper estimated at 20 annas.

## Na'sik, 1891.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Niphá'd. | | Yeola. | | Na'ndgaon. | | Málegaon. | | Sata'na. | | Kalvan. | | Cha'ndor. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·03 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·05 | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | .. | .. | .. | .. | .. | .. | 0·70 | 1 | 0·07 | .. | .. | .. | 0·24 | 1 | 0·05 | .. | 0·06 | .. | .. | .. | .. | .. | .. | .. |
| Monsoon-Kharif .. | 14·99 | 27 | 86·29 | 45 | 11·79 | 24 | 10·80 | 24 | 9·07 | 21 | 11·86 | 24 | 8·25 | 21 | 10·85 | 22 | 14·96 | 24 | 15·46 | 29 | 16·84 | 31 | 65·55 | 40 |
| Monsoon-Rabi .. | 10·97 | 16 | 32·81 | 39 | 7·55 | 14 | 5·22 | 6 | 7·97 | 11 | 10·60 | 13 | 6·41 | 12 | 5·21 | 8 | 5·67 | 10 | 5·65 | 9 | 7·73 | 11 | 32·24 | 36 |
| Late Rains .. | .. | .. | 0·09 | .. | 0·03 | .. | .. | .. | 0·13 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total ... | 25·99 | 43 | 119·19 | 84 | 19·37 | 38 | 17·42 | 31 | 17·24 | 33 | 22·46 | 37 | 14·90 | 34 | 16·11 | 30 | 20·74 | 34 | 21·11 | 38 | 24·57 | 42 | 97·79 | 76 |
| Average .. | 13·74 | 49 | 130·08 | 109 | 27·21 | 59 | 22·68 | 46 | 21·88 | 32 | 28·13 | 31 | 25·36 | 29 | 24·11 | 37 | 34·82 | 47 | 29·48 | 58 | 32·43 | 67 | 92·36 | 101 |

*General characteristics*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—Rainfall generally below average. Little rain fell in the ante-monsoon period. Regular monsoon broke with light showers at end of June, and sowings of tushar and kharif crops commenced. In Dángi tálukas rain fell almost daily in July and August, seasonable and sufficient for transplantation of rice, nágli, &c. Eleswhere heavy rain of Pushya at end of July followed by partial break in the middle of August, was seasonable for kharif sowings, though late. Purva rain in early September was generally beneficial to standing crops. Hast rain was light in Deshi parts except at Nándgaon, while there were no late rains; consequently rabi crops suffered more or less. On the whole season fairly good. Outturn of tushar and kharíf crops was good (16—20 annas) in Málegaon, Báglán, Chándor and Kalvan; fair (10—12 annas) in Násik and Peint; elsewhere poor, being below 8 annas. Rabi crop full average in Niphád (16 annas), in Nándgaon and Kalvan 10—14 annas, elsewhere 8 annas or less.

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## Ahmadnagar, 1891.

| Rain Periods. | 1 Nagar. | | 2 Pa'ener. | | 3 Shrigonda. | | 4 Karjat. | | 5 Ja'mkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Ra'huri. | | 9 Kopargaon. | | 10 Sangamner. | | 11 Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·06 | .. | 0·49 | 1 | .. | .. | .. | .. | 0·32 | 1 | 1·66 | 3 | 0·44 | 1 | 0·40 | 1 | .. | .. | 0·06 | .. | .. | .. |
| Ante-Monsoon .. | 0·45 | 2 | .. | .. | 0·03 | .. | .. | .. | 0·56 | 2 | 0·05 | .. | .. | .. | 0·25 | 1 | .. | .. | .. | .. | .. | .. |
| Monsoon-Kharif .. | 4·85 | 14 | 6·25 | 16 | 3·35 | 11 | 3·60 | 14 | 5·39 | 14 | 5·71 | 12 | 4·42 | 13 | 7·18 | 13 | 7·69 | 20 | 7·12 | 19 | 12·39 | 27 |
| Monsoon-Rabi .. | 10·82 | 12 | 9·03 | 14 | 8·04 | 9 | 8·96 | 17 | 15·71 | 19 | 17·70 | 20 | 12·82 | 13 | 9·60 | 12 | 5·85 | 10 | 5·80 | 6 | 4·63 | 7 |
| Late Rains .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 16·18 | 28 | 15·77 | 31 | 11·42 | 20 | 12·56 | 31 | 21·98 | 36 | 25·12 | 35 | 17·68 | 27 | 17·43 | 27 | 13·54 | 30 | 12·98 | 25 | 17·02 | 34 |
| Average .. | 25·11 | 36 | 23·16 | 51 | 21·52 | 29 | 25·38 | 33 | 28·95 | 42 | 26·94 | 37 | 25·42 | 40 | 22·86 | 28 | 18·41 | 30 | 20·86 | 32 | 23·0 | 46 |

*General characteristics*—(*1*) *Desh*—Godávari valley (tálukas 6 to 9): rich alluvial plains growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukas 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukas 1, 2, 5 and 10 lie between these valleys. Alternation of bare hill and treeless plain with occasional fertile well-wooded tracts. Rain more regular. (*2*) *Dángs*—Half Akola has very heavy rain, half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Rainfall throughout below average. No rain in ante-monsoon period, except light local showers. Regular monsoon commenced late in June with light showers, useful for sowing of bájri, mug, udid, &c., but insufficient for cotton sowing except in Ráhuri. Pushya rain in the 3rd week of July was fairly heavy and favourable for early sown crops of bájri, mug, &c., and for further kharif sowings. Rainfall of A'shlesha and Magha was very scant, and crops suffered considerably owing to the prolonged break. Relief came with the general heavy rain of Purva (30th August to 3rd September), highly beneficial to withering crops as well as for rabi sowing. No rain in Uttara. Hast rain, however, was fairly, heavy and very seasonable for standing kharif and for rabi sowings. No rain fell after Hast, though rabi crops were greatly in need of closing showers. Season was on the whole poor. Outturn of tushar crops estimated at 6—8 annas in Nevása and Ráhuri and 2—4 annas elsewhere; kharif outturn at 5—10 annas, except Karjat where 2 annas; and rabi outturn at 6—10 annas.

## Poona, 1891.

| Rain Periods. | Poona. | | Paud. | | Vadgaon. | | Lonávli. | | Khed. | | Ghoda. | | Junnar. | | Siru'r. | | Sásvad. | | Supa. | | Bárámati. | | Indápur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·02 | ... | ... | ... | 0·03 | ... | ... | ... | 0·15 | 1 | ... | ... | 1·24 | 1 | 0·29 | 1 | ... | ... | 0·13 | 1 | 0·09 | ... | 1·07 | 2 |
| Ante-Monsoon ... | 1·06 | 3 | 0·02 | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | 0·05 | ... | 1·12 | 3 | 1·45 | 2 | 0·54 | 2 | 0·23 | ... |
| Monsoon-Kharif ... | 11·20 | 25 | 38·42 | 38 | 22·59 | 31 | 127·84 | 51 | 9·65 | 23 | 10·07 | 23 | 17·10 | 27 | 5·53 | 8 | 7·86 | 21 | 2·16 | 9 | 5·97 | 15 | 4·44 | 12 |
| Monsoon-Rabi ... | 6·40 | 14 | 11·28 | 26 | 9·06 | 19 | 52·12 | 49 | 4·65 | 13 | 5·19 | 11 | 11·55 | 17 | 8·32 | 12 | 4·87 | 9 | 6·98 | 9 | 9·58 | 14 | 11·68 | 16 |
| Late Rains... ... | ... | ... | 00·5 | ... | 0·52 | 1 | ... | ... | ... | ... | ... | ... | 0·16 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 0·20 | 1 |
| Total ... | 18·68 | 42 | 49·77 | 64 | 32·20 | 51 | 179·96 | 100 | 14·45 | 37 | 15·26 | 34 | 30·05 | 46 | 14·19 | 21 | 13·85 | 33 | 10·72 | 21 | 16·18 | 31 | 17·62 | 31 |
| Average ... | 31·06 | 62 | 60·16 | 97 | 64·93 | 75 | 158·04 | 116 | 24·66 | 43 | 30·14 | 58 | 28·67 | 59 | 21·73 | 30 | 23·25 | 42 | 20·32 | 32 | 22·72 | 42 | 24·78 | 35 |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Haveli and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukas are uncertain and irregular like the adjoining tálukas of Sholápur.

*Remarks.*—Rainfall generally below average. Ante-monsoon showers very light in the Desh and almost absent in the Mával. Monsoon began late with light showers, and kharif sowings generally retarded till end of June. July rain was sufficient and seasonable for transplantation of rice, nágli, &c., in the Mával and for sowing of bájri and other kharif crops in northern and central tálukas. In south-eastern tálukas, however, it was very scant, and kharif sowings only partially effected. Fairly heavy rain fell in Purva at end of August and proved very beneficial to standing kharif, as also for rabi sowings. There was no rain in Uttara, and the prolonged break was severely felt, especially in the Desh, where bájri and other kharif crops suffered more or less. General heavy rain of Hast was most opportune both for kharif crops and for rabi sowing. Very little rain fell in November, and both kharif and rabi crops suffered, especially in the Desh (Sirúr, Bhimthadi and Purandhar) where the year was one of scarcity. The outturn of rice and coarse grains in west was estimated at 8—10 annas; elsewhere yield both of kharif and rabi crops very poor, 3—5 annas.

## Sholápur, 1891.

| Rain Periods. | Shola'pur. | | Ba'rsi. | | Ma'dha. | | Karma'la. | | Pandharpur. | | Sa'ngola. | | Ma'lsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·43 | 1 | 1·10 | 3 | 1·83 | 5 | 0·49 | 2 | 2·25 | 4 | 2·05 | 3 | 1·86 | 6 |
| Ante-Monsoon ... ... ... | 0·47 | 1 | 0·63 | 2 | 0·52 | 2 | 0·02 | ... | 1·24 | 3 | 0·79 | 3 | 0·55 | 2 |
| Monsoon-Kharif ... ... | 4·27 | 10 | 7·12 | 15 | 4·77 | 13 | 4·12 | 14 | 4·13 | 10 | 3·52 | 8 | 2·89 | 6 |
| Monsoon-Rabi ... ... ... | 18·59 | 13 | 12·54 | 13 | 12·33 | 16 | 11·34 | 15 | 14·79 | 21 | 10·22 | 15 | 9·74 | 15 |
| Late Rains ... ... ... | ... | ... | 1·09 | 1 | 0·48 | 1 | 0·10 | 1 | 0·50 | 1 | ... | ... | 0·02 | ... |
| Total ... | 23·76 | 25 | 22·48 | 34 | 19·93 | 37 | 16·07 | 32 | 22·91 | 39 | 16·58 | 29 | 14·86 | 29 |
| Average ... | 33·33 | 34 | 32·35 | 49 | 27·89 | 38 | 26·32 | 36 | 27·65 | 40 | 22·99 | 33 | 21·07 | 37 |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Rainfall throughout below average. Monsoon commenced late in June with scattered showers only sufficient for partial sowings of bájri, tur, &c. Pushya rain in middle of July, fair at Bársi, where sowings completed; elsewhere kharif sowings partial, and crops, where sown, began to wither. The prolonged break was relieved at end of August by general heavy showers of Purva, which greatly benefited withering crops. Cultivators, however, believing in the continuance of rain, did not take advantage of these showers in sowing rabi crops, and were disappointed, as a prolonged break again occurred in September. Rabi sowings were effected after the general heavy fall of Hast, but subsequently there was no rain, except light showers of Vishákha at Bársi, Mádha and Pandharpur, and consequently the crops failed. Season was poor on the whole. Kharif crops generally failed, and the outturn was almost nil, or about one anna, except in Bársi, where it was 6 annas. Rabi yield was fair in Bársi and along the banks of the Bhima in Pandharpur (10—12 annas); elsewhere from 4—8 annas. The scarcity was seriously felt in Sángola and Málsiras, whence after the failure of rabi crops upwards of 10,000 people emigrated in search of employment. The grass crop was only about one-half, and came to hand as late as the middle of October instead of the middle of August. Water-supply deficient throughout, village tanks being empty two months earlier than usual.

## Sátára, 1891.

| Rain Periods. | Sátára. | | Koregaon. | | Wái. | | Khandála. | | Medha. | | Málcolm-peth. | | Pátan. | | Karád. | | Peth. | | Shirála. | | Dahivádi. | | Vadu'j. | | Vita. | | Tásgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·50 | 1 | 0·44 | 1 | 0·02 | ... | 0·40 | 1 | ... | ... | ... | ... | 0·10 | 1 | 0·62 | 3 | 2·71 | 4 | 0·50 | 1 | 1·42 | 2 | 0·78 | 3 | 1·30 | 4 | 0·41 | 1 |
| Ante-Monsoon ... | 0·71 | 2 | 0·59 | 3 | 0·35 | 1 | 0·50 | 2 | 2·74 | 5 | 0·08 | ... | 2·03 | 4 | 1·76 | 3 | 3·39 | 8 | 3·85 | 3 | 0·96 | 5 | 3·33 | 4 | 1·13 | 5 | 3·44 | 3 |
| Monsoon-Kharif ... | 27·41 | 36 | 12·03 | 30 | 12·70 | 26 | 4·55 | 10 | 60·90 | 40 | 187·30 | 57 | 51·97 | 41 | 17·49 | 36 | 7·14 | 24 | 14·30 | 31 | 7·32 | 11 | 8·06 | 14 | 8·17 | 24 | 7·90 | 24 |
| Monsoon-Rabi ... | 7·38 | 8 | 5·70 | 11 | 8·19 | 11 | 4·37 | 8 | 10·48 | 15 | 72·85 | 52 | 9·34 | 20 | 6·03 | 13 | 4·30 | 11 | 5·23 | 9 | 6·58 | 12 | 6·25 | 14 | 3·42 | 8 | 6·54 | 12 |
| Late Rains ... ... | 0·30 | 1 | 0·01 | ... | ... | ... | ... | ... | ... | ... | 0·62 | 1 | 0·45 | 1 | 0·25 | 1 | 1·77 | 1 | 0·40 | 1 | 0·02 | .. | ... | ... | ... | ... | 0·63 | 1 |
| Total ... | 36·30 | 48 | 18·77 | 45 | 21·26 | 38 | 9·82 | 21 | 74·12 | 60 | 260·85 | 110 | 63·89 | 67 | 26·15 | 56 | 19·31 | 48 | 24·28 | 45 | 16·30 | 30 | 18·42 | 35 | 14·02 | 41 | 18·92 | 41 |
| Average ... | 40·84 | 80 | 27·68 | 61 | 32·47 | 60 | 21·45 | 38 | 70·49 | 79 | 268·08 | 125 | 67·85 | 85 | 31·64 | 62 | 29·43 | 48 | 37·88 | 59 | 20·51 | 42 | 21·85 | 40 | 24·71 | 62 | 28·49 | 51 |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—Rainfall generally below the average. Ante-monsoon showers light, but useful for preparing land. Monsoon commenced late in June with scattered showers of A'rdra, fairly heavy in south-east, where partial sowings commenced, general heavy rain of Pushya at end of July favourrable for rice transplantation in the west and for kharif sowings elsewhere, except in north-east, where rain was light and sowings delayed. August rain, though in light showers, was seasonable in western and central parts. In north-eastern tálukas it was very deficient, and crops began to suffer. September rain was throughout deficient, especially in central and south-eastern tálukas, and kharif crops generally suffered from want of moisture. Relief came in early October with general heavy showers of Hast, very beneficial to withering kharif as well as for rabi sowings. Very little rain, however, fell subsequently, and crops suffered heavily. In parts of tálukas Mán, Khatáv, Khánápur and Tásgaon both kharif and rabi crops failed, or the yield was only nominal. In central and western tálukas, however, the outturn was fair, being estimated at 8—12 annas, while crops on the banks of the Krishna were unusually good.

## Belgaum, 1891.

| Rain Periods. | Belgaum. | | Chandgad. | | Khána'pur. | | Sampgaon. | | Saundatti. | | Murgod. | | Gokák. | | Chikodi. | | Hukeri. | | Athni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 1·70 | 4 | 2·02 | 1 | 0·47 | 2 | 1·88 | 4 | 0·40 | 2 | 2·10 | 4 | 4·11 | 7 | 1·90 | 5 | 3·40 | 4 | 0·99 | 3 |
| Ante-Monsoon ... ... | 1·86 | 6 | 5·81 | 10 | 4·15 | 7 | 5·30 | 9 | 7·44 | 12 | 3·13 | 5 | 1·68 | 7 | 4·76 | 9 | 3·44 | 5 | 2·95 | 10 |
| Monsoon-Kharif ... | 29·62 | 37 | 71·37 | 43 | 49·05 | 42 | 11·72 | 28 | 6·40 | 19 | 9·92 | 22 | 8·07 | 17 | 12·45 | 29 | 11·32 | 27 | 1·61 | 3 |
| Monsoon-Rabi ... ... | 8·05 | 20 | 16·94 | 34 | 12·15 | 28 | 6·80 | 14 | 4·78 | 12 | 5·73 | 12 | 7·15 | 10 | 5·76 | 13 | 6·02 | 10 | 1·68 | 7 |
| Late Rains ... ... | 2·11 | 5 | 0·88 | 2 | 1·90 | 5 | 1·88 | 4 | 0·40 | 1 | 0·50 | 1 | 1·62 | 2 | 2·10 | 3 | 0·85 | 1 | 0·03 | ... |
| Toral ... | 43·34 | 72 | 97·02 | 90 | 67·72 | 84 | 27·58 | 59 | 19·42 | 46 | 21·38 | 44 | 22·63 | 43 | 26·97 | 59 | 25·03 | 47 | 7·26 | 23 |
| Average ... | 46·60 | 83 | 95·98 | 113 | 64·68 | 103 | 28·14 | 64 | 24·47 | 35 | 24·40 | 49 | 23·79 | 45 | 27·65 | 48 | 21·60 | 48 | 24·42 | 38 |

*General characteristics.*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Balgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukas show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—Rainfall below average in north and east, especially in Athni; elsewhere up to average. Ante-monsoon showers in April and May unusually heavy, but not of much use, except for preparing land for cultivation. Monsoon set in with light and scattered showers, useful for sowing rice in south-west, and udid, til, &c., in light red soils. Heavy sowing rain came late in July and was sufficient in south-west for rice transplantation and kharif sowings; elsewhere it was light, and only useful for sowings in red light soils, but not sufficient for black soils, especially in Athni, where it was most deficient. Rainfall in August was fair in south-west; deficient elsewhere. September rain was throughout deficient, and crops suffered everywhere, though some relief was obtained in south-west by occasional light showers of Purva. Rabi sowing generally retarded, and great anxiety was felt. Relief came with general heavy rain of Hast in early October, reviving kharíf crops and allowing rabi sowings. Late rains failed, and crops suffered everywhere. Season was on the whole fair in south-west, kharif outturn being estimated at 10—16 annas; elsewhere 1—6 annas. Rabi outturn exceptionally good at Sampgaon, being 16 annas for all crops; Belgaum and Khánápur 8—10 annas; elsewhere 1—6 annas. Kháríf and rabi rains especially deficient in three north-eastern tálukas of Parasgad, Gokák and Athni, sowings only partial, and crops where sown failed owing to absence of late rains, necessitating the notification of famine. Relief works opened, and large takávi advances made to provide labour to distressed people. Relief works kept open from January to July 1892, the highest daily attendance being about 4,000 in May.

## Bijápur, 1891.

| Rain Periods. | Bija'pur. | | Indi. | | Sindgi. | | Ba'geva'di. | | Mudde-biha'l. | | Ba'galkot. | | Bilgi. | | Ba'da'mi. | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... ... | 1·72 | 4 | 0·74 | 2 | 1·59 | 4 | 1·74 | 3 | 1·28 | 1 | 0·57 | 1 | 3·08 | 2 | 1·25 | 2 | 2·27 | 2 |
| Ante-Monsoon... ... ... ... | 2·30 | 6 | 1·02 | 5 | 2·00 | 5 | 1·54 | 4 | 2·58 | 4 | 2·44 | 5 | 2·14 | 5 | 3·24 | 11 | 1·68 | 6 |
| Monsoon-Kharif ... ... ... | 2·99 | 8 | 2·95 | 10 | 6·01 | 13 | 3·84 | 11 | 5·70 | 14 | 5·18 | 14 | 3·27 | 8 | 4·72 | 15 | 3·44 | 14 |
| Monsoon-Rabi... ... ... ... | 6·35 | 12 | 8·61 | 11 | 8·33 | 16 | 10·33 | 15 | 9·20 | 14 | 5·76 | 9 | 8·28 | 16 | 6·19 | 12 | 7·11 | 16 |
| Late Rains ... ... ... ... | 0·34 | 1 | ... | ... | 0·25 | 1 | 0·62 | 2 | ... | ... | 0·03 | ... | 0·70 | 1 | 1·70 | 2 | 1·72 | 2 |
| Total ... | 13·70 | 31 | 13·32 | 28 | 18·68 | 39 | 18·07 | 35 | 18·76 | 33 | 13·98 | 29 | 17·47 | 32 | 17·10 | 42 | 16·22 | 40 |
| Average ... | 26·79 | 38 | 25·73 | 46 | 25·71 | 39 | 25·02 | 47 | 23·46 | 46 | 24·07 | 39 | 22·93 | 40 | 25·51 | 39 | 25·82 | 35 |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukas of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Rainfall throughout below average. Ante-monsoon showers favourable for preparing land. Monsoon set in (5th June) in light showers. Fair rain at end of June in A'rdra, but kharif sowings only partial. Rainfall in July and greater part of August very scant, and kharif crops, where sown, generally withered. Purva rain at end of August and beginning of September highly beneficial to surviving kharif and for commencing sowing of cotton and rabi jowári. A long break followed till end of September, and rabi sowings retarded. Most of the rabi land was, however, sown under favourable rain of Hast in early October, and had the rain continued until 1st week of November crops would have yielded well. Late rains failing, all crops, except rabi jowári and some kharif bájri, failed altogether. Jowári was a wretched crop, in no place exceeding 6 or 8 annas, generally from 2 to 4 annas, and in many places never coming to ear or even producing fodder. "The main feature of the year was the absolute absence of general rain. Local showers fell generally accompanied by thunder, and extending over small areas, and the high winds continued during nearly the whole year." Famine was declared in the whole district. Large takávi advances (Rs. 2,84,000) were made, and relief works were opened, but the attendance was small. Scarcity of fodder and drinking water was severely felt, and numbers emigrated with their cattle to the Nizám's territory and elsewhere.

## Dhárwár, 1891.

| Rain Periods. | Dha'rwa'r. | | Mugud. | | Hubli. | | Kalghatgi. | | Banka'pur. | | Hángal. | | Kod. | | Ra'nebennur. | | Karajgi. | | Gadag. | | Mundargi. | | Naval-gund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 2·16 | 4 | 4·94 | 3 | 3·44 | 3 | 1·85 | 1 | 0·05 | ... | ... | ... | ... | ... | ... | ... | 0·14 | 1 | 0·62 | 1 | ... | ... | ... | ... | 0·70 | 3 | 0·06 | ... |
| Ante-Monsoon ... | 6·69 | 10 | 5·64 | 7 | 5·65 | 9 | 4·72 | 9 | 2·01 | 5 | 5·08 | 6 | 2·62 | 5 | 3·60 | 9 | 3·67 | 8 | 3·21 | 8 | 2·97 | 9 | 3·89 | 6 | 4·13 | 9 | 4·14 | 8 |
| Monsoon-Kharif... | 10·65 | 32 | 16·32 | 37 | 8·16 | 31 | 12·72 | 29 | 9·83 | 30 | 15·92 | 33 | 10·79 | 34 | 5·84 | 18 | 5·30 | 21 | 6·76 | 18 | 5·98 | 6 | 3·39 | 11 | 4·02 | 9 | 5·71 | 11 |
| Monsoon-Rabi ... | 6·35 | 11 | 4·09 | 7 | 3·35 | 10 | 7·74 | 15 | 4·14 | 15 | 11·62 | 22 | 13·23 | 14 | 4·82 | 12 | 4·98 | 10 | 4·27 | 11 | 2·49 | 6 | 6·68 | 11 | 6·05 | 12 | 5·58 | 12 |
| Late Rains ... | 1·99 | 4 | 0·81 | 2 | 0·91 | 3 | 1·89 | 4 | 1·00 | 2 | 1·98 | 3 | 1·55 | 2 | 1·24 | 2 | 1·59 | 4 | 0·21 | 1 | 0·28 | 1 | 0·97 | 3 | 0·70 | 2 | 0·24 | 1 |
| Total ... | 27·84 | 61 | 31·80 | 56 | 26·51 | 56 | 28·92 | 58 | 17·03 | 52 | 34·60 | 64 | 28·19 | 55 | 15·50 | 41 | 15·68 | 44 | 15·07 | 39 | 11·72 | 22 | 14·93 | 31 | 15·90 | 35 | 15·73 | 32 |
| Average ... | 32·95 | 65 | 34·34 | 70 | 27·03 | 49 | 30·14 | 81 | 28·29 | 58 | 37·34 | 82 | 27·70 | 59 | 23·82 | 51 | 27·21 | 50 | 25·98 | 42 | 17·51 | 46 | 25·36 | 35 | 23·56 | 37 | 25·77 | 42 |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur tálukas are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: 'Good rain won't give a big crop, nor will bad rain bring famine.' This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Rainfall much below average, except in west. Ante-monsoon showers fairly heavy and throughout useful for preparing the land, and for commencing early sowings of rice in the malád. Monsoon set in at end of June, and kharif sowings generally began. July rain, though not up to requirements, was on the whole sufficient for kharif sowings, except in north-east, where rainfall was very scant, and sown crops began to wither, and further sowings retarded. A'shlesha rain in first fortnight of August was generally fair, but rainfall in latter half of August and the whole of September was so scant that kharif crops were seriously affected everywhere and rabi sowings delayed. Relief came early in October with general heavy showers of Hast, which were of immense value to withering crops and for rabi sowings. Rains, however, soon closed, and all crops suffered in outturn. In south and west, kharif generally below average, except in Dhárwár, Kalghatgi and parts of Hubli, where it was up to average. Rabi crops failed almost everywhere. In the three north-eastern tálukas, where famine was notified, early rains were scant, and kharif sown to a very small extent. Late rain failed when most needed (end of October), and both kharif and rabi crops were lost in many parts, the outturn being estimated at about 2 annas. Liberal takávi advances (Rs. 3,20,000) were made, and relief works opened. Scarcity of water and fodder was especially felt. Temporary wells dug by Local Boards, and forests thrown open for grazing. Many cattle were driven to malád and Kánára forests for grazing.

## Kánara, 1891.

| Rain Periods. | Kárwár. | | Ankola. | | Kumta. | | Hona'var. | | Bhatkal. | | Haliya'l. | | Supa. | | Yellápur. | | Mundgod. | | Sirsi. | | Sidda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | 0·37 | 1 | 0·08 | .. | 0·07 | ... | 0·39 | 2 | 3·10 | 3 | 1·43 | 2 | 0·10 | .. | 2·40 | 4 | 1·01 | 2 |
| Ante-Monsoon.. .. | ·08 | .. | .. | .. | .. | .. | 0·24 | 1 | 0·17 | 1 | 3·64 | 7 | 2·61 | 7 | 2·71 | 7 | 4·16 | 7 | 2·48 | 6 | 1·65 | 4 |
| Monsoon-Kharif .. | 59·31 | 58 | 61·20 | 60 | 82·17 | 61 | 78·40 | 59 | 93·96 | 59 | 18·62 | 39 | 56·69 | 43 | 71·77 | 45 | 22·19 | 37 | 60·42 | 52 | 72·30 | 52 |
| Monsoon-Rabi.. .. | 21·38 | 39 | 19·82 | 39 | 27·00 | 40 | 24·55 | 41 | 28·09 | 44 | 6·76 | 23 | 15·94 | 33 | 15·12 | 39 | 10·33 | 22 | 13·68 | 32 | 19·62 | 40 |
| Late Rains .. .. | 1·51 | 5 | 1·05 | 3 | 1·44 | 3 | 0·36 | 1 | 0·76 | 2 | 1·90 | 4 | 3·39 | 6 | 0·83 | 3 | 1·69 | 3 | 3·19 | 4 | 3·64 | 3 |
| Total .. | 82·28 | 102 | 82·07 | 102 | 110·98 | 105 | 103·63 | 102 | 123·05 | 106 | 31·31 | 75 | 81·73 | 92 | 91·86 | 96 | 38·47 | 69 | 82·17 | 98 | 98·22 | 101 |
| Average .. | 116·62 | 98 | 126·46 | 107 | 133·11 | 108 | 128·38 | 109 | 140·91 | 114 | 44·37 | 88 | 89·18 | 108 | 91·56 | 111 | [illegible]·25 | 87 | 91·94 | 105 | 98·93 | 100 |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The lowland or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—Rainfall much below average in coast tálukas and up to or a little below average in upland tálukas. Monsoon broke with Mrig (6th June) on coast, where rain was continuous and favourable, but hardly any rain above gháts till end of June. Heavy rain fell in July and August throughout the district, seasonable and sufficient for rice transplantation, weeding, &c. Rainfall in September, especially that of Uttara, was very scant in upland tálukas, where crops slightly suffered from want of moisture. Chitra rain in October was throughout beneficial, especially in upland tálukas. On the whole season was favourable, and the outturn of crops all round reported 16 annas.

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## Ratnágiri, 1891.

| Rain Periods. | Ratna'giri. | | Vengurla. | | Ma'lvan. | | Devgad. | | Ra'ja'pur. | | Sangameshvar. | | Chiplun. | | Guha'gar. | | Khed. | | Da'poli. | | Mandangad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | 0·25 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon.. .. | .. | .. | 0·05 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Monsoon-Kharif .. | 64·38 | 50 | 58·69 | 49 | 51·80 | 45 | 49·56 | 49 | 80·48 | 56 | 81·52 | 48 | 79·81 | 50 | 67·20 | 42 | 82·48 | 49 | 73·21 | 52 | 102·14 | 52 |
| Monsoon-Rabi.. .. | 26·79 | 33 | 17·13 | 35 | 11·89 | 20 | 14·12 | 33 | 28·65 | 41 | 31·77 | 44 | 34·01 | 43 | 24·79 | 36 | 30·86 | 37 | 27·16 | 40 | 46·91 | 48 |
| Late Rains .. .. | .. | .. | 1·29 | 2 | 0·25 | 1 | 0·58 | 2 | 1·11 | 1 | 1·00 | 1 | 0·07 | .. | 0·15 | 1 | 0·40 | 1 | 0·80 | 2 | 1·06 | 2 |
| Total .. | 91·17 | 83 | 77·41 | 87 | 63·94 | 66 | 64·26 | 84 | 110·24 | 98 | 114·29 | 93 | 113·89 | 93 | 92·14 | 79 | 113·74 | 87 | 101·17 | 94 | 150·11 | 102 |
| Average .. | 100·73 | 96 | 101·48 | 95 | 89·57 | 93 | 87·50 | 89 | 127·91 | 107 | 145·57 | 118 | 146·04 | 110 | 100·84 | 97 | 130·52 | 115 | 132·64 | 104 | 150·79 | 114 |

*General characteristics.*—The district is formed by a narrow belt of low land; though hilly, and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Rainfall below average. South-west monsoon broke nominally on 8th June, but scarcely any rain fell till the end of Mrig (19th June). Ardra rain in latter half of June was sufficient for completing kharif sowings. General heavy rain of Pushya, in latter half of July, was throughout seasonable and sufficient for transplantation. Rain in August and September fell in daily light showers, and was on the whole beneficial to standing crops, though not sufficient for rice, especially the late variety. Owing to scantiness of late rains, the late crops and the garden crop suffered, and scarcity of drinking water and fodder was felt in the hot weather, especially along the gháts. Season was on the whole fair. The outturn was estimated—early rice 16 annas, late rice 14 annas, nágli both varieties 13 annas, harik 10 annas.

## Kolába, 1891.

| Rain Periods. | Alibág. | | Panvel. | | Uran. | | Karjat. | | Máthherán. | | Khálápur. | | Pen. | | Roha. | | Mángaon. | | Mahád. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Eraly Rains ... ... | 0·20 | 1 | 0·01 | ... | ... | ... | ... | ... | ... | ... | 0·02 | ... | 0·15 | 1 | 0·18 | 1 | 0·02 | ... | 0·10 | 1 |
| Ante-Monsoon ... ... | 0·02 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... ... | 57·50 | 43 | 65·89 | 44 | 58·51 | 41 | 66·28 | 45 | 120·16 | 51 | 66·19 | 48 | 67·10 | 47 | 68·25 | 48 | 59·19 | 48 | 62·77 | 49 |
| Monsoon-Rabi ... ... | 24·33 | 39 | 40·56 | 28 | 34·76 | 36 | 44·94 | 41 | 69·99 | 45 | 45·00 | 41 | 43·53 | 42 | 31·09 | 44 | 37·76 | 40 | 37·62 | 41 |
| Late Rains ... ... | ... | ... | 0·34 | 1 | ... | ... | ... | ... | 1·16 | 1 | 0·43 | 1 | 0·07 | ... | ... | ... | 0·10 | 1 | ... | ... |
| Total ... | 82·05 | 83 | [illegible]·80 | 73 | 93·27 | 77 | 111·22 | 86 | 191·31 | 97 | 111·64 | 90 | 110·85 | 90 | 99·52 | 93 | 97·07 | 89 | 100·49 | 91 |
| Average ... | 84·79 | 90 | 110·50 | 99 | 95·48 | 89 | 126·91 | 101 | 209·71 | 121 | 122·09 | 108 | 114·04 | 108 | 122·27 | 103 | 127·59 | 112 | 130·58 | 107 |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heaviest in parts towards the Sahyádris.

*Remarks.*—Rainfall below average throughout the district. Regular monsoon commenced very late in A'rdra (about 21st June) when kharif sowings were taken in hand. July rain generally heavy and throughout seasonable and sufficient for ploughing and transplantation. Rainfall in August, though generally light, was on the whole beneficial to young crops, being favourable for weeding. In September heavy rain fell in Purva and Hast in the beginning and again at end of the month, and all crops benefited. Very little rain fell after Hast, and though late crops suffered from want of moisture, season was on the whole good. Outturn of kharif crops estimated at 12—14 annas. Owing to absence of late rain rabi outturn 10 annas. only.

## Thána, 1891.

| Rain Periods. | Thána. | | Kalya'n. | | Murbád. | | Shahápur. | | Mokháda. | | Bhiwndi. | | Bassein. | | Va'da. | | Máhim. | | Daha'nu. | | Umbargaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·13 | 1 | 0·17 | 1 | 0·10 | 1 | 0·16 | 1 | 0·02 | ... | 0·26 | 1 | 0·22 | 2 | ... | ... | 0·05 | ... | 0·10 | 1 | ... | ... |
| Ante-Monsoon ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... | 64·80 | 46 | 67·29 | 39 | 55·21 | 39 | 63·11 | 45 | 66·44 | 47 | 61·68 | 41 | 55·19 | 37 | 57·76 | 39 | 35·03 | 37 | 44·31 | 35 | 50·32 | 32 |
| Monsoon-Rabi ... ... | 34·42 | 37 | 34·35 | 36 | 41·32 | 40 | 33·44 | 38 | 25·12 | 37 | 35·81 | 34 | 27·45 | 29 | 25·12 | 31 | 12·34 | 20 | 8·07 | 20 | 15·19 | 20 |
| Late Rains ... ... | ... | ... | ... | ... | 0·30 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 0·10 | 1 | ... | ... | ... | ... | ... | ... |
| Total ... | 99·35 | 84 | 101·81 | 76 | 96·93 | 81 | 96·71 | 84 | 91·58 | 84 | 97·75 | 76 | 82·86 | 68 | 82·98 | 71 | 47·42 | 57 | 52·48 | 56 | 65·51 | 52 |
| Average ... | 99·12 | 97 | 100·73 | 94 | 96·15 | 104 | 111·34 | 105 | 100·92 | 106 | 101·79 | 96 | 78·85 | 77 | 95·96 | 98 | 62·67 | 77 | 71·39 | 81 | 64·83 | 70 |

*General characteristics.*—Inland, the district is well watered and well wooded. Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Rainfall generally below or up to average. The regular monsoon set in very late at end of June, and kharif sowings much retarded. Rainfall in July and August generally seasonable, the Pushya rain in latter half of July being heavy throughout the district and sufficient for transplantation. Rain of Purva and Hast in the beginning and end of September was heavy and throughout favourable for standing crops. October rain being, however, deficient, late rice slightly suffered in outturn, and rabi cultivation diminished. Season was on the whole fair. Outturn of early crops was good, being estimated at 13—20 annas. Rabi outturn was estimated at 12 annas.

## Surat, 1891.

| Rain Periods. | Surat. | | Olpa'd. | | Ra'ndher. | | Ma'ndvi. | | Ba'rdoli. | | Va'lod. | | Jala'lpor. | | Chikhli. | | Balsa'r. | | Pardi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·04 | ... | ... | ... | 0·08 | ... | ... | ... | 0·11 | 1 | 0·06 | ... | 0·07 | ... | 0·11 | 1 | 0·05 | ... | 0·10 | ... |
| Ante-Monsoon ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... ... | 42·35 | 24 | 33·09 | 25 | 39·40 | 25 | 45·02 | 29 | 48·63 | 29 | 44·47 | 29 | 54·22 | 34 | 48·04 | 33 | 43·20 | 31 | 54·09 | 38 |
| Monsoon-Rabi ... ... | 21·50 | 16 | 17·25 | 16 | 19·00 | 18 | 24·23 | 22 | 14·69 | 19 | 19·04 | 22 | 10·96 | 16 | 16·30 | 21 | 14·21 | 24 | 18·57 | 27 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 63·89 | 40 | 50·34 | 41 | 58·48 | 43 | 69·25 | 51 | 63·43 | 49 | 63·57 | 51 | 65·25 | 50 | 64·45 | 55 | 57·46 | 55 | 72·76 | 65 |
| Average ... | 44·06 | 53 | 35·52 | 42 | 42·95 | 60 | 65·27 | 65 | 53·82 | 66 | 61·31 | 69 | 58·96 | 60 | 77·63 | 80 | 74·43 | 79 | 71·49 | 82 |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east Dángs with heavy rainfall but light soil. As a rule, rain lighter on the coast than inland.

*Remarks.*—Rainfall generally above average, except in Chikhli and Balsár. Monsoon set in with light showers about 25th of June. Kharíf sowings of rice, jowári, bájri, cotton, &c., commenced. Punarvasu rain in 1st half of July was fairly heavy and favourable for kharif sowings. But the cyclonic downpour of Pushya at end of July was injurious to jowári and cotton plants, necessitating resowing in low-lying lands. In August seasonable rain of A'slesha followed by a short break in Magha was favourable for resowing of cotton where necessary and for weeding. Purva rain at end of August was heavy, and though slightly harmful to newly sown cotton in low-lying lands was on the whole beneficial to rice and other standing crops. Rainfall in September was throughout seasonable. Hast rain in early October was deficient, especially for rice and for rabi sowing. Season was favourable on the whole. Rice outturn estimated at 12—16 annas, jowári 12 annas, bájri 9 annas, cotton 13, wheat 14, and gram, oil-seeds, &c., 9 annas.

## Broach, 1891.

| Rain Periods. | Broach. | | Ankleśvar. | | Hánsot. | | Vágra. | | A'mod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains... ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·39 | 1 | 0·13 | 1 |
| Ante-Monsoon ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharíf ... | 45·78 | 25 | 48·10 | 24 | 39·94 | 22 | 29·92 | 26 | 18·58 | 18 | 18·57 | 16 |
| Monsoon-Rabi ... | 12·86 | 13 | 13·49 | 14 | 12·80 | 12 | 14·21 | 16 | 12·11 | 14 | 10·38 | 13 |
| Late Rains... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 58·64 | 38 | 61·59 | 38 | 52·74 | 34 | 44·13 | 42 | 31·08 | 33 | 29·08 | 30 |
| Average ... | 44·21 | 37 | 41·41 | 41 | 34·24 | 33 | 30·60 | 38 | 41·75 | 36 | 39·46 | 36 |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being, as a rule, more plentiful in the Broach Táluka. The rainfall is spplemented by heavy dews from October to December.

*Remarks.*—Rainfall above average, except A'mod and Jambusar in north. Monsoon broke with fair showers at end of June, and kharíf sowings of coton, rice, bájri, &c., commenced. Punarvasu rain in first half of July was favourable, though insufficient for sowing. General heavy rain in Pushya about 20th July continued favourably for a week, but the cyclonic rain of 28th—29th, amounting to 25 inches in south, was injurious, necessitating resowing of cotton and jowár in many places. A clear fortnight's break in Magha was valuable for resowing of rabi jowár, &c., for weeding, and for growth of crops. September rain was throughout seasonable and useful for standing kharif crops and for rabi sowing. No rain fell after Hast, though a closing shower was desirable in north. Season was favourable on the whole. Cotton was generally good, the average outturn being estimated at 10 annas. Jowár was slightly damaged in Jambusar, where outturn reduced to 5 annas, rice 8—14 annas. Rábi outturn of wheat and gram was 15 and 12 annas respectively.

## Kaira, 1891.

| Rain Periods. | Kaira. | | Mehmad-abad. | | Ma'tar. | | Nadia'd. | | Kapadvanj. | | Tha'sra. | | A'nand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·19 | 1 | 0·10 | 1 | .. | .. | .. | .. | .. | .. | 0·05 | .. | .. | .. | .. | .. |
| Ante-Monsoon ... ... ... | .. | .. | .. | .. | .. | .. | .. | .. | 0·11 | 1 | 0·02 | .. | .. | .. | .. | .. |
| Monsoon-Kharif... ... ... | 21·12 | 17 | 19·78 | 14 | 20·73 | 16 | 18·74 | 19 | 19·45 | 18 | 17·00 | 16 | 28·09 | 19 | 18·74 | 19 |
| Monsoon-Rabi ... ... ... | 6·96 | 8 | 4·21 | 7 | 7·56 | 6 | 7·78 | 9 | 6·45 | 10 | 8·59 | 11 | 5·77 | 9 | 8·62 | 10 |
| Late Rains ... ... ... | ... | ... | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. |
| Total ... | 28·27 | 26 | 24·09 | 22 | 28·29 | 22 | 26·52 | 28 | 26·01 | 29 | 25·66 | 27 | 33·86 | 28 | 27·36 | 29 |
| Average ... | 37·13 | 46 | 34·24 | 37 | 37·93 | 39 | 37·27 | 45 | 34·57 | 39 | 36·66 | 36 | 38·44 | 38 | 37·89 | 37 |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land; the centre, a tract of most fertile soil yielding the choicest crops; and westward a bare, though well cultivated, tract of rice land.

*Remarks.*—Rainfall throughout below average. Monsoon broke late at end of June with fair showers of A'rdra favourable for kharif sowings. Rain, however, held off for a fortnight, and sowings retarded, and seedlings began to wither. General heavy rain of Pushya at end of July beneficial for transplantation of rice, kodra, bávto, &c. Rain in August was moderate, and fell at seasonable intervals, the break allowing weeding and completion of sowings. Planting of tobacco was done in early September. The heavy fall of Uttara (19th—24th September) was throughout seasonable, and sufficient for standing crops. No rain fell in October, and rice suffered from want of moisture when maturing. The absence of late rains affected the outturn of rabi crops. Season fair on the whole. Average estimated outturn—jowári 14 annas, bájri and wheat 12 annas, kodra 11 annas, oil-seeds 10 annas, rice and cotton 9 annas, gram 7 annas.

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## Panch Maháls 1891.

| Rain Periods. | Godhra. | | Ka'lol. | | Ha'lol. | | Dohad. | | Jha'lod. | | Jambughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·10 | 1 | 0·07 | ... |
| Ante-Monsoon ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Monsoon-Kharif ... | 18·61 | 19 | 24·89 | 22 | 25·95 | 24 | 13·39 | 19 | 14·34 | 19 | 22·47 | 26 |
| Monsoon-Rabi ... | 10·47 | 15 | 12·59 | 15 | 13·03 | 13 | 12·79 | 19 | 15·68 | 13 | 16·96 | 16 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 29·08 | 34 | 37·48 | 37 | 38·98 | 37 | 26·18 | 38 | 30·12 | 33 | 39·50 | |
| Average ... | 43·24 | 46 | 40·20 | 46 | 47·97 | 45 | 32·59 | 44 | 32·65 | 40 | 50·69 | 54 |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Rainfall throughout below average. Fair showers in the first week of July useful for sowings of kharif crops, but general sowing rain came at end of July, and though rather excessive in places was on the whole seasonable and sufficient for full kharif sowings and for rice transplantation. A fortnight's break (11th—27th August) was favourable for completing bájri sowing, for resowing of crops damaged by caterpillars, and for weeding. Heavy showers of Purva at end of August, though slightly injurious to late sown bájri in places, generally benefited standing crops. September rain coming in fair showers, after seasonable breaks was throughout favourable for standing kharif and for rabi sowing. No rain in October, except showers of Hast on 6th—7th, which, though light, were valuable for rabi sowings, especially in east. Season was fair on the whole Outturn of kharif crops estimated at 8—14 annas. Rabi outturn was fair in Dohad and Jhálod (10—12 annas); elsewhere poor (4—8 annas).

## Ahmadabad, 1891.

| Rain Periods. | Ahmadabad. | | Parántij. | | Moda'sa. | | Sánand. | | Viramgám. | | Dholka. | | Dhandhuka. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·03 | ... | 0·10 | ... | 0·19 | 1 | ... | ... | 0·04 | ... | ... | ... | ... | ... | 0·08 | ... |
| Ante-Monsoon ... | ... | ... | ... | ... | 0·10 | 1 | ... | ... | 0·01 | ... | 0·14 | 1 | 0·26 | 1 | ... | ... |
| Monsoon-Kharif ... | 23·51 | 17 | 19·98 | 25 | 23·84 | 26 | 23·34 | 18 | 30·08 | 19 | 19·19 | 19 | 15·91 | 15 | 12·10 | 19 |
| Monsoon-Rabi ... | 2·05 | 3 | 2·70 | 7 | 4·26 | 8 | 3·17 | 4 | 4·66 | 5 | 6·62 | 7 | 6·96 | 9 | 10·71 | 13 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 25·59 | 20 | 22·78 | 32 | 28·39 | 36 | 26·51 | 22 | 34·79 | 24 | 25·95 | 27 | 23·13 | 25 | 22·89 | 32 |
| Average ... | 29·92 | 43 | 30·08 | 45 | 37·32 | 44 | 31·09 | 42 | 28·22 | 37 | 36·39 | 36 | 27·92 | 25 | 27·35 | 35 |

*General characteristics.*—Except in the hilly parts of Modása, where the supply is sometimes considerable, the rainfall throughout the district is generally very light.

*Remarks.*—Rainfall generally below average, except Viramgám. Monsoon set in very late. There were light to fair showers at end of June and 1st week of July sufficient to commence partial sowing, but general sowing rain held off until 20th July, when heavy fall of Pushya was sufficient for kharif sowings and rice transplantation. Partial break in August favourable for completing kharif sowings of jowár, bájri, &c., though injuriously prolonged in north. Rainfall in September generally seasonable, but not sufficient for standing crops, especially for rice in north. Very little rain fell in October, and consequently rice suffered in outturn. Season fair on the whole. Average outturn of kharif estimated at 10—12 annas. Rabi outturn, cotton and wheat, 9—10 annas and gram 6 annas.

## APPENDIX A.

*Note on the Dairy Herd and Fodder Crops at the Poona Farm by Mr. J. Mollison, M.R.A.C., Superintendent of Farms.*

### *Breeds of Milch Cattle.*

1. A Jafferabadi buffalo, even of good class, is in Poona a less profitable milk-producer than a well-selected Surat buffalo. The former requires a greater quantity of concentrated food and fodder to produce a given quantity of milk. Several of our Surat buffaloes gave 30 lbs. and over per day after calving; none of the Jafferabadi gave more than 26 lbs. Buffaloes are extremely excitable, and any cause of irritation or irregularity in feeding will at once re-act on the yield of milk. They are also apt to be irregular breeders. The period between calvings, with the farm buffaloes, averages about 16 months, which means that about one-third of them will be "dry" at a time.

2. Gir cows are as unsatisfactory in this respect, and, moreover, my conviction is that they do not, under the best of management, maintain in the Deccan the same deep milking qualities which they possess when grazed on the Gir hills. Three very good cows brought last year from Bhávnagar are, however, now being tried in order finally to settle this point.

3. Aden cows are, without exception, the best milk breed of cows we have yet tested. They are very docile, and their milk yield is not easily affected by irregularity. If well cared for, the heifers mature earlier than with most Indian breeds, and come into profit sooner. The cows give an equal yield of milk to that of large breeds, on much less food. They come in "season" 6 weeks to 2 months after calving, and, if permitted, will milk up to the day they again calve. We have a four-year old bull that does, or can do, as much work in a day as a good málvi bullock, but their small size is of course against this breed as work cattle. Our best Aden cow gives after calving 22 lbs. milk per day, and never gives less than 10 lbs. It is significant that our next best milker is a five-year daughter of this cow, by a Gir bull.

4. The practical outcome of feeding experiments during the year has been that dry fodder and concentrated food, with water *ad libitum* given during the hot weather in lieu of green fodder, gave milk richer in butter fat than at any other season; but the yield of milk per animal was reduced. In the hot weather, buffalo milk gave practically 1 lb. butter from 10 lbs. milk. In the rains and afterwards, when a good deal of the food is succulent, the average is about 1 lb. of butter from 12 lbs. of milk. We make no butter from cow's milk, and the relative difference in their case cannot, therefore, be stated. But the comparative value of buffaloes and cows as butter-producers is shown by the following record of butter-fat percentages as indicated by Soxhlet's apparatus. The feeding of the animals at the dates when tests were made was of like quality, but of course varied in quantity according to the size and milk yield of individuals:—

| | Average yield of milk per day at date of test. | Percentage of butter fat. |
|---|---|---|
| | Lbs. | |
| Buffalo ... ... ... ... | 25 | 7·1 |
| Buffalo ... ... ... ... | 13 | 7·6 |
| Aden cow ... ... ... ... | 17 | 4·7 |
| Gir cow ... .. ... ... | 11 | 5·3 |

When these tests were taken, the whole of the cattle were allowed a fair quantity of green fodder, but were not grazed.

5. It is observable that, in the case of cattle partially grazed and partially stall-fed, a liberal night feed of guinea-grass, or Reana luxurians, or of fresh grass of good quality, produces a yield of milk greater than if green kulthi or jowári is given in like quantity. The three former can safely be given in a more tender succulent state than the two latter. Besides, the cattle like them better than jowári or kulthi. Lucerne is not a good fodder for milch cattle. It cannot safely be fed in quantities exceeding 10 lbs. per day per animal. Jowári should be well in flower before it is fed; otherwise, like lucerne, it has a tendency to cause tympanitis. Cotton seed, except when an ample allowance of green fodder is given, cannot be safely fed in any quantity exceeding 4 lbs. per animal per day. It is one of our best and cheapest foods, and gives firm butter of fine quality. Oil-cake in quantity exceeding 4 lbs. per animal spoils the quality of the butter, but increases its weight. Til or sesamum cake is best, but is dear and, like kala-til (khurásni) cake, has on the score of economy given place to kusumbi (safflower) cake, which we buy in Ahmadnagar at 101 lbs. per rupee. This cake has the advantage of keeping for months without moulding. But animals have to get accustomed to it before they will eat it readily. Bran and chuni (dál husk) are the other foods we depend upon. An effort was made to utilize brewer's grain from the Deccan Brewery last hot weather, the idea being that the food

might be found useful as a substitute for green fodders. It was proved to give an increased yield of poor milk. But the experiment was not persevered with, because it was impossible to get a supply except two or three times a week, and, kept for more than two days, the grains soured, and moulded, and in the very hot weather got fly-blown and full of maggots.

6. I do not think that the yield of milk from the best of our milch cattle is increased or affected in any way by a ration exceeding 18 to 20 lbs. of concentrated food per day. This would be given to a large-framed buffalo giving 26 to 32 lbs. milk per day, along with good dry fodder weighing 14 to 18 lbs. and its equivalent of green fodder; or half the quantity of dry fodder and 20 to 40 lbs. green. For an average buffalo giving 18 lbs. of milk per day and entirely stall-fed, the following has been found a good and liberal ration :—

| | |
|---|---|
| Dry fodder ... ... ... ... ... ... | 6 to 8 lbs. |
| Green fodder .. ... ... ... ... ... | 40 „ |
| Cotton seed ... ... ... ... ... ... | 4 „ |
| Kusumbi cake ... ... ... ... ... ... | 4 „ |
| Dál husk .. ... ... .. ... ... ... | 3 „ |
| Bran ... ... ... ... ... ... ... | 3 „ |
| Salt ... ... ... ... ... ... ... | 2 ozs. |
| Water ... ... ... ... ... ... ... | *ad libitum.* |

7. It is possible to overdo the feeding of milch cattle. A good milker should not be in high condition. An animal in very high condition will give very little milk, and this probably accounts for a common practice with Gaolis, *viz.*, to give a less quantity of food to a fat animal, in order that the milk yield may increase.

8. The following tabular statement shows the comparative value in cultivation of fodder crops as ascertained by our experiments :—

*Comparison of Fodder Crops grown on the Poona Farm.*

| Crop. | Outturn in lbs. per acre per annum. | Cost of cultivation, manures, harvesting and marketing. | | | Value of produce. | | | Rate in lbs. per rupee (Poona). | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| | | Rs. | a. | p. | Rs. | a. | p. | | |
| Lucerne... ... | 85,456 | 295 | 4 | 0 | 569 | 10 | 0 | 150 | Crop cut 14 times during year. Lucerne is a delicate crop in some respects, and subject to a variety of insect attacks, while the seedlings are young, if the seed is sown any time between July and October. In wet weather disease is also apt to attack the roots. |
| Guinea-grass ... | 101,568 | 280 | 12 | 0 | 507 | 13 | 0 | 200 | Crop cut 8 times during year. Guinea-grass is a less risky crop than lucerne, and is practically exempt from disease and insect pests. Grows well under shade trees. |
| Teosinte (Reana luxurians). | 80,778 | 276 | 4 | 0 | 314 | 2 | 0 | 225 | The permanency of this crop is doubtful. The young shoots spring slowly from the root stumps and appear less vigorous each time a "cut" is taken. Three cuts only have yet been obtained, and the recorded figures are based on the assumption that the crop will give equally good successive cuts during a whole year (since this was written successive cuts have fallen off considerably), and in the Deccan, at any rate, the plant cannot be rated as a perennial. Its only advantage over jowári thus disappears. |

| Crop. | Outturn* in lbs. per acre per annum. | Cost of cultivation, manures, harvesting and marketing. | Value of produce. | Rate in lbs. per rupee (Poona). | Remarks. |
|---|---|---|---|---|---|
| | | Rs. a. p. | Rs. a. p. | | |
| Kulthi ... ... | 7,912 per crop. | 11 12 0 | 26 6 0 | 300 | Valued at rather a lower rate than the other fodder, because liberally rationed dairy cattle reject the coarser stems, and thus some waste is caused. A crop of fodder jowári, either "shiálu" grown in the cold weather or hot-weather irrigated "kadwal", can follow kulthi in the same year. The figures recorded refer to an unmanured crop. |
| Sundhia jowári (Gujarát). | 18,690 per crop. | 44 2 0 | 74 12 0 | 250 | A crop of gram could be taken after "sundhia" which was grown in the rains. A crop of kulthi might precede the hot-weather "kadwal". The crops were manured with 20 loads farm-yard manure per acre. The cost of growing "kadwal" is higher than that of "sundhia", because the water-rate (Rs. 9 per acre) and cost of watering are included. |
| Hot-weather kadwal jowári (irrigated). | 19,220 | 62 0 11 | 76 14 0 | 250 | |

* Crops weighed wet or dry according to weather.

# APPENDIX B.

*Exports of Indian wheat from Bombay and Karáchi to all Ports beyond the Presidency from 1880—1892.*

| Year. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *Exports from Bombay.* | | | | | | | |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| 1880... ... | 2,927 | 1,626 | 3,407 | 4,985 | 17,110 | 19,407 | 15,055 | 7,832 | 4,193 | 6,527 | 8,652 | 22,991 | 114,712 |
| 1881 .. ... | 21,768 | 19,275 | 20,000 | 32,481 | 42,428 | 52,236 | 47,369 | 28,172 | 35,132 | 48,835 | 76,714 | 48,559 | 472,969 |
| 1882... ... | 85,674 | 40,239 | 30,557 | 30,390 | 67,886 | 37,190 | 19,386 | 5,396 | 13,797 | 22,317 | 34,159 | 32,703 | 419,694 |
| 1883 .. .. | 31,019 | 25,403 | 29,516 | 37,503 | 76,205 | 82,881 | 55,921 | 32,425 | 36,265 | 18,466 | 29,319 | 34,508 | 489,431 |
| 1884 .. ... | 15,285 | 15,933 | 14,997 | 15,230 | 44,831 | 54,894 | 65,437 | 45,546 | 30,974 | 19,045 | 28,038 | 27,806 | 378,016 |
| 1885 .. ... | 41,846 | 32,366 | 45,824 | 38,933 | 56,871 | 66,602 | 33,379 | 38,004 | 48,975 | 52,808 | 59,598 | 53,977 | 569,183 |
| 1886... ... | 31,424 | 24,484 | 28,402 | 71,581 | 124,232 | 56,341 | 38,715 | 52,896 | 55,461 | 51,166 | 37,584 | 53,433 | 625,719 |
| 1887... ... | 44,235 | 21,379 | 26,595 | 75,325 | 101,018 | 113,946 | 20,172 | 12,657 | 14,778 | 14,106 | 17,383 | 11,129 | 472,723 |
| 1888 .. ... | 12,090 | 14,419 | 23,729 | 67,400 | 118,586 | 66,165 | 32,841 | 32,472 | 29,514 | 46,241 | 28,058 | 23,022 | 494,537 |
| 1889 .. ... | 47,591 | 18,567 | 26,949 | 30,649 | 41,838 | 15,934 | 20,382 | 23,129 | 17,796 | 21,390 | 17,716 | 31,569 | 313,510 |
| 1890 .. ... | 22,795 | 7,653 | 9,191 | 36,907 | 49,386 | 26,745 | 25,562 | 15,362 | 4,045 | 12,312 | 37,824 | 36,387 | 284,169 |
| 1891... ... | 36,141 | 12,681 | 19,882 | 70,161 | 156,136 | 150,086 | 35,001 | 25,552 | 33,310 | 48,962 | 40,264 | 36,517 | 664,693 |
| 1892... .. | 51,940 | 29,601 | 48,505 | 71,908 | 117,037 | 45,157 | 22,906 | 30,689 | ... | ... | ... | ... | ... |
| | | | | | | *Exports from Karáchi.* | | | | | | | |
| 1880... ... | 1,487 | 4,677 | 2,792 | 1,160 | 1,819 | 893 | 808 | 217 | 172 | 351 | 955 | 647 | 15,978 |
| 1881... ... | 1,163 | 409 | 182 | 820 | 1,647 | 1,055 | 3,439 | 2,300 | 7,809 | 12,207 | 18,575 | 20,280 | 69,686 |
| 1882... ... | 16,794 | 5,390 | 2,296 | 3,105 | 5,276 | 7,833 | 7,516 | 8,282 | 10,012 | 11,023 | 23,571 | 16,910 | 118,008 |
| 1883... ... | 8,161 | 19,158 | 15,767 | 2,356 | 4,830 | 21,289 | 39,198 | 33,013 | 11,946 | 11,815 | 17,264 | 14,551 | 217,348 |
| 1884... ... | 8,832 | 14,438 | 21,110 | 8,533 | 6,752 | 9,683 | 14,001 | 23,733 | 18,343 | 21,376 | 27,331 | 18,869 | 192,951 |
| 1885... ... | 12,023 | 21,745 | 31,204 | 19,648 | 12,511 | 13,612 | 29,768 | 35,476 | 28,716 | 40,741 | 30,376 | 46,116 | 321,936 |
| 1886... ... | 27,926 | 13,619 | 13,542 | 7,975 | 12,326 | 20,531 | 24,299 | 11,331 | 17,563 | 18,781 | 4,487 | 6,581 | 178,961 |
| 1887... ... | 4,420 | 2,090 | 304 | 20 | 1,539 | 7,621 | 7,698 | 2,098 | 181 | 3,081 | 3,609 | 2,960 | 35,621 |
| 1888... ... | 1,325 | 1,794 | 1,111 | 461 | 4,995 | 15,330 | 15,921 | 19,826 | 24,291 | 17,836 | 25,765 | 24,842 | 153,480 |
| 1889 .. ... | 29,514 | 10,074 | 11,365 | 19,271 | 11,186 | 24,137 | 46,366 | 32,009 | 28,263 | 34,647 | 52,626 | 49,068 | 348,726 |
| 1890... ... | 27,607 | 18,174 | 11,409 | 7,656 | 12,012 | 18,746 | 54,553 | 46,919 | 24,471 | 41,861 | 32,312 | 35,572 | 331,292 |
| 1891 .. ... | 26,964 | 16,530 | 20,763 | 6,946 | 2,457 | 41,968 | 107,434 | 94,249 | 66,226 | 66,305 | 35,930 | 41,408 | 527,175 |
| 1892 .. ... | 26,005 | 42,163 | 28,134 | 17,720 | 18,983 | 50,735 | 32,181 | 23,586 | ... | ... | ... | ... | ... |

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FOR THE YEAR 1892-93.

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1893.

BOMBAY BRANCH
OF THE
Royal Asiatic Society.
CLASS

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No. 3455 OF 1893.

FROM

E. C. OZANNE, ESQUIRE, I. C. S., M.R.A.C.,
Survey Commissioner, and Director,
Land Records and Agriculture,
Bombay;

To

G. W. VIDAL, ESQUIRE, I. C. S.,
Acting Chief Secretary to Government,
Revenue Department,
Bombay.

*Poona, 18th November 1893.*

SIR,

I have the honour to submit the Annual Report of the Department of Land Records and Agriculture for the year ending 31st October 1893.

Mr. Cappel continued to hold the office of the Director of Land Records and Agriculture till 27th March, when I assumed the charge of the amalgamated offices of the Director, Land Records and Agriculture and the Survey and Settlement Commissioner under the orders contained in Government Resolution No. 1319 of 16th February 1893, Revenue Department. Mr. Cappel held charge of the combined offices from 23rd September to 15th October during my deputation to attend the Simla Agricultural Conference.

2. During the year a small establishment paid from a special Imperial grant has been entrusted with the duty, under my supervision, of checking the price registers, from which the figures for the Imperial fortnightly statement of prices current, and the Provincial monthly statement for military purposes, are prepared. The experiment, which was recommended by me and was approved by Government Resolution No. 3653 of 1892, General Department, has worked most satisfactorily. Errors of system and many serious misconceptions have been brought to light, and corrected: and certainly more attention on the part of the officers immediately responsible for the registration has been secured. The savings to Government resulting from the scrutiny of the Price Inspectors have amply justified the cost of the establishment and the system of inspection, which, moreover, is valuable in ensuring greater correctness of price quotations for purposes of general administration.

The two Inspectors completed the tour of all the reporting stations during the year.

3. Mr. Cappel visited the horse and cattle shows at Ahmadnagar, Jacobabad, Chinchli and Ahmadabad, the farms at Bhadgaon, Hyderabad (Sind) and Nadiád, and the veterinary grant-in-aid dispensaries at Ahmadabad and Nadiád. From April my tours, as Director, comprised an inspection of the District Survey offices of Belgaum, Bijápur and Dhárwár and a visit to the Haliyál Táluka, where the Survey Department having completed the work, the Revenue Department is responsible for the revision of rates now due.

The Director has thus found little leisure for personally inspecting the Kanungo Staff and the District Survey offices, and indeed little can be expected as long as settlement work demands so large a portion of his time. A close check over the staff has, however, been maintained by the Divisional Inspectors, who in this capacity are virtually Assistants to the Director.

4. My annual report has been delayed by the late receipt of the returns from the Divisional Inspectors. Those of the Southern Division only reached my office on the 23rd October, about which date also the last batch of the Central Division reports was received. These returns were due on the 15th September.

The Divisional Inspectors complain that the returns were delayed by non-receipt of district returns on the prescribed dates.

I.—ORGANIZATION AND MAINTENANCE OF VILLAGE RECORDS.

5. The present distribution of the Circle Inspectors or Kanungos is as follows:—

| Division. | Former number of Bhág Kárkuns. | Number of Circle Inspectors. | | | Number of Bhág Kárkuns deputed to Mámlatdár's Office. |
|---|---|---|---|---|---|
| | | Bhág Kárkuns utilized as Circle Inspectors. | Additional hands. | Total number. | |
| Southern Division (except Kolába) ... | 136 | 33 | 96 | 129 | 103 |
| Central Division ... | 204 | 98 | 97 | 195 | 106 |
| Northern Do. (Ahmadabad) ... | 15 | 6 | 8 | 14 | 9 |

Ahmadabad was equipped with the new staff in July. Of the 8 new appointments 6 were made from the Survey Department and 2 from passed students of the Agricultural College.

*Record room.*—Owing to want of suitable accommodation the records of Ahmadabad still remain in the survey head-quarters at Surat. The district survey records are suitably housed in all districts of the Southern Division except at Ratnágiri, where a record room is under construction. In the Central Division, however, temporary accommodation, more or less suitable, has been provided pending the erection of record rooms at the district head-quarters, save that the Násik and Khándesh records are temporarily located in the old survey offices at Málegaon.

The Divisional Inspectors, besides their regular duties of field inspection and of supervision of the District Survey offices, conducted a few crop experiments. Mr. Lushington in the Southern Division was on special duty for two months to settle a disputed boundary between Portuguese and British territory. In the monsoon he went on tour to watch measures for the destruction of rats and to ascertain the extent of their devastations. On this officer has also fallen the duty of preparing proposals for a revision of rates on the expiry of the current lease in the Haliyál Táluka of Kánara. This settlement will be the first to be effected by the Department of Land Records and Agriculture without assistance from the professional survey.

Survey classes at Ahmadabad and all other district head-quarters, except Dhárwár, Bijápur, Belgaum and Ratnágiri, were held in the monsoon for the training, in surveying, of Circle Inspectors recruited otherwise than from the Survey Department. Several members of the subordinate revenue staff joined these classes with the permission of the Collector. At the examinations which follow the classes, Circle Inspectors recruited from the Survey Department, who have not passed the examination already, also appear to prove their acquaintance with the Revenue Manual. All candidates are examined in the special rules for Circle Inspectors which were provisionally sanctioned by Government in 1891. These rules have recently been thoroughly revised by me in committee with the Divisional Inspectors in the light of criticisms and suggestions received from Collectors. The revised rules approved by the Commissioners now await the final sanction of Government.

The rules for the guidance of District Inspectors and for the conduct of work in the District Survey offices have also been revised and submitted for the approval of the Commissioners.

The duties of the Divisional Inspectors have been formulated with the sanction of Government.

6. The work done by the Circle Inspectors will now be passed in review under the set heads, and the extent to which that work has been subjected to test by

superior authority. The special conditions of the Ratnágiri district require separate review.

7. *Crop, Waste and Boundary-mark Inspection.*—The results may be tabulated thus:—

| District. | Average by each Inspector. | | | | | | Average Area of occupied Numbers. | | Average Area of inspected Numbers. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number of days of actual Inspection. | | Number of villages inspected. | | Number of Survey Numbers (occupied and waste) inspected per day. | | | | | |
| | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Dhárwár ... ... | 59 | 60 | 44 | 38 | 8·7 | 9·4 | 11·9 | 11·1 | 10·4 | 8·4 |
| Bijápur ... ... | 60 | 54 | 44 | 34 | 8·8 | 9·2 | 16·1 | 16·2 | 14·6 | 14·5 |
| Belgaum ... ... | 65 | 46 | 41 | 29 | 8·9 | 9·0 | 10·6 | 10·5 | 9·0 | 6·3 |
| Kánara ... ... | 32 | 74 | 38 | 40 | 6·5 | 9·6 | 2·5 | 2·4 | 2·3 | 2·3 |
| Khándesh ... | 80 | ... | 54 | ... | 11 | ... | 10·3 | ... | 9·7 | ... |
| Násik ... ... | 82 | ... | 42 | ... | 11 | ... | 8·5 | ... | 7·7 | ... |
| Ahmadnagar ... | 81 | ... | 38 | ... | 10 | ... | 13 | ... | 10·0 | ... |
| Poona ... ... | 68 | ... | 42 | ... | 8 | ... | 11 | ... | 7·0 | ... |
| Sholápur ... ... | 71 | ... | 35 | ... | 9 | ... | 20 | ... | 16·0 | ... |
| Sátára ... ... | 74 | ... | 35 | ... | 8 | ... | 9 | ... | 5·0 | ... |

The period allotted to this inspection includes about 80 working days. Days are lost by sickness among the Inspectors, by their being called on to do other emergent work such as partitions under Court decree, and by the absence of the village accountants at the time of the Inspector's visit. In Kánara the inspection period was authoritatively curtailed for the Haliyál boundary-mark inspection which will be noticed further on in its place. In Bijápur and Belgaum some improvement in the number of days of actual inspection is apparent. In the Central Division the number of working days on which work was done is very satisfactory. In Poona, however, the number is comparatively low.

As was anticipated, the selection of small numbers by Inspectors has been checked, and the gradual inspection of all the lands in turn has thus been ensured. There is an improvement in the number of villages visited in the Southern Division, and the daily tale of work, as shown by column 6, is fairly satisfactory. It has been decided in the revised Circle Inspector Rules that the Collector should fix the standard required for his district in the future.

The difficulty of finding competent substitutes for Circle Inspectors during short absences on leave has been considerable. Collectors have been requested, as far as possible, to follow the precedent of the Survey Department in refusing leave during the fair season, except for urgent reasons. The difficulty will be further decreased if a larger number of revenue kárkuns volunteer for the Survey Class, and thus qualify themselves as substitutes and for permanent appointments in the special staff when there are vacancies. It is very evident that service in this special branch is unpopular, and proposals for special recruitment from outside are under consideration under conditions which will not entail deterioration in the quality of the inspecting staff.

*Inspection Percentage Statement.*

| District. | Villages inspected per cent. | | Crop Inspection. Occupied Lands. Percentage inspected. On Survey Numbers. | | Crop Inspection. Occupied Lands. Percentage inspected. On Area. | | Waste Inspection. Unoccupied Lands. Percentage inspected. On Survey Numbers. | | Waste Inspection. Unoccupied Lands. Percentage inspected. On Area. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Dhárwár ... | 87 | 75 | 7·6 | 10·0 | 6·7 | 7·6 | 20·4 | 24·2 | 15·6 | 16·8 |
| Bijápur ... | 90 | 69 | 6·3 | 7·5 | 5·8 | 6·9 | 22·6 | 31·6 | 18·4 | 22·3 |
| Belgaum ... | 92 | 64 | 7·1 | 7·0 | 6·0 | 4·2 | 21·5 | 24·2 | 17·0 | 14·8 |
| Kánara ... | 64 | 65 | 4·7 | 14·1 | 4·3 | 13·6 | 7·4 | 19·3 | 4·2 | 10·7 |
| Khándesh ... | 84 | ... | 12·3 | ... | 11·6 | ... | 20·2 | ... | 14·8 | ... |
| Násik ... ... | 89 | ... | 10·8 | ... | 9·8 | ... | 13·6 | ... | 17·0 | ... |
| Ahmadnagar ... | 93 | ... | 10·4 | ... | 8·1 | ... | 29·3 | ... | 24·6 | ... |
| Poona ... ... | 82 | ... | 6·7 | ... | 3·8 | ... | 30·6 | ... | 20·9 | ... |
| Sholápur ... | 94 | ... | 10·6 | ... | 8·3 | ... | 36·9 | ... | 28·4 | ... |
| Sátára ... ... | 94 | ... | 8·2 | ... | 4·2 | ... | 25·3 | ... | 21·1 | ... |

*Note.*—In columns 4 and after, the percentage is on total area of villages inspected.

*Column 2.*—The percentage of villages inspected is generally satisfactory, but improvement must still be insisted on. All villages should be visited. In one district, at least, Assistant Collectors have utilized Circle Inspectors in conducting crop experiments. This does not appear reasonable, unless the motive is to test the competency of the Inspector.

*Column 4.*—Crop inspection is fair throughout in its extent.

*Column 8.*—Waste inspection is also satisfactory in extent in the Central Division, except in Násik. In the Southern Division it is both below the standard and below the outturn of last year. In Kánara the curtailment of the inspection period sufficiently explains the low percentage.

The object of the waste inspection is, in part, a maintenance of boundary marks, but chiefly the detection of unauthorized cultivation. In the Central Division no less than 933 cases of encroachment, presumably in most part cases of unauthorized cultivation of waste, were detected, of which only 257 cases had been detected by the village officers. In the Southern Division, encroachments have clearly been checked by the work done by the Inspectors in previous years. Only 193 cases were brought to light, but of these very few (only 29) had been reported by the village officers. It seems that a case is made out for special attention to this subject on the part of Collectors. It is the duty of the village officers to report every case of unauthorized cultivation, and negligence should be sure of its punishment.

| District. | Entries found correct. 1892-93. | Entries found correct. 1891-92. | District. | Entries found correct. 1892-93. |
|---|---|---|---|---|
| Dhárwár ... ... | 46 | 52 | Khándesh ... | 69 |
| Bijápur ... ... | 42 | 52 | Násik ... ... | 77 |
| Belgaum ... ... | 44 | 56 | Ahmadnagar ... | 52 |
| Kánara ... ... | 72 | 78 | Poona ... .. | 57 |
| | | | Sholápur ... | 56 |
| | | | Sátára ... ... | 66 |

The quality of the crop registration by village officers is shown in the marginal percentage table. Where variable crop mixtures abound, as in Dhárwár and Bijápur especially, the work is no doubt more difficult, but in these two districts the improvement noticed last year has disappeared.

8. *Boundary-mark Inspection.*—The quality of the boundary-mark inspection carried out annually by the village officers, which it must be carefully remembered is only checked by the Inspectors as regards those fields of which crop or waste inspection is made, is unsatisfactory, as the following table shows :—

| District. | Marks found in disrepair. (Percentages.) | | | | | |
|---|---|---|---|---|---|---|
| | Shown in Village Form III as in disrepair. | | Omitted. | | Wrongly shown as in repair. | |
| | 1892-93. | 1891-92. | 1892-93. | 1891-92. | 1892-93. | 1891-92. |
| Dhárwár ... ... ... ... | 14 | 15 | 62 | 62 | 24 | 23 |
| Bijápur ... ... ... ... | 20 | 27 | 43 | 40 | 37 | 33 |
| Belgaum ... ... ... ... | 13 | 12 | 58 | 53 | 29 | 35 |
| Kánara ... ... ... ... | 27 | 46 | 55 | 32 | 18 | 22 |
| Khándesh ... ... ... | 56 | ... | 31 | ... | 12 | ... |
| Násik ... ... ... ... | 39 | ... | 14 | ... | 47 | ... |
| Ahmadnagar ... ... ... | 73 | ... | 16 | ... | 11 | ... |
| Poona ... ... ... ... | 42 | ... | 31 | ... | 27 | ... |
| Sholápur ... ... ... ... | 39 | ... | 46 | ... | 15 | ... |
| Sátára ... ... ... ... | 53 | ... | 33 | ... | 14 | ... |

The still high percentage in column 4 shows that village officers have not been more punctual in their boundary-mark inspection. It would appear from the above table that the registration in villages in the Central Division is superior both in punctuality and in correctness, but it is not improbable that the latter superiority is only due to inexperience on the part of the Inspectors and consequent hesitation to class doubtful marks as marks in disrepair.

9. The superior check exercised by District Inspectors is exhibited in the following statement :—

| District. | Number of Circles. | | Number of villages in which test taken. | Crop Inspection. | | Waste Inspection. | | Boundary-mark Inspection. | |
|---|---|---|---|---|---|---|---|---|---|
| | Total. | Visited. | | Percentage on Circle Inspectors' work. | Quality of work found. | Percentage on Circle Inspectors' work. | Quality of work found. | Percentage on Circle Inspectors' work. | Quality of work found. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Dhárwár ... ... ... ... | 28 | 27 | 34 | 1·60 | 75 | 2·40 | 94 | 1·50 | 97 |
| Bijápur ... ... ... ... | 24 | 20 | 44 | 2·20 | 78 | 2·70 | 97 | 0·20 | 96 |
| Belgaum ... ... ... ... | 24 | 22 | 27 | 0·80 | 62 | 0·50 | 42 | 0·60 | 93 |
| Kánará ... ... ... .. | 23 | 22 | 42 | 2·50 | 83 | 1·30 | 100 | 0·12 | 75 |
| Khándesh... ... ... ... | 48 | 34 | 150 | 4·50 | 91 | 3·07 | 100 | 4·30 | 93 |
| Násik ... ... ... ... | 35 | 32 | 60 | 1·50 | 70 | 3·00 | 100 | 0·10 | 61 |
| Ahmadnagar ... ... ... | 33 | 19 | 83 | 3·00 | 63 | 4·00 | 88 | 2·00 | 69 |
| Poona ... ... ... .. | 23 | 23 | 128 | 6·00 | 81 | 9·00 | 94 | 6·00 | 90 |
| Sholápur ... ... ... ... | 19 | 19 | 45 | 1·00 | 66 | 3·00 | 96 | 2·00 | 98 |
| Satara ... ... ... .. | 32 | 32 | 116 | 5·00 | 64 | 9·00 | 83 | 2·00 | 85 |

*Note.*—Colums 6, 8 and 10 show the percentage on entries found correct.

*Column 3.*—Satisfactory, except in Khándesh. In Ahmadnagar the comparative small number of villages visited by the District Inspector was due to the special attention paid by him to the instruction of the raw material of which the newly organized staff is composed.

*Column 4.*—In Khándesh there is an Assistant District Inspector, but in Poona and Sátára the number of villages visited is excessive. A thorough check is better secured by confining the test to a few villages in each circle.

*Columns 5, 7 and 9.*—In Belgaum the District Inspector's work is totally insufficient, and he has apparently attempted to disguise the deficiency by over-severity of check. It is impossible to believe that the fairly well trained Inspectors of Belgaum could have misjudged the crop areas in about 40 per cent. of the tested fields and still more impossible to believe that they were so negligent as to omit notice of unauthorized cultivation in about 60 per cent of the waste. This District Inspector has recently been reduced in salary for his general inattention to work, as proved by the examination of his office made by the Divisional Inspector and myself. In Poona and Sátára the District Inspectors were especially

active and their test very comprehensive, though perhaps somewhat excessive. On the whole, with the exception noted, I consider the work done by the District Inspectors to have been very creditable. The training they themselves are receiving will be of special value to Government when they rejoin the regular Revenue Department as Mámlatdárs.

10. *General Duty Inspector.*—Except in Khándesh, where there are still táluka classers, one Circle Inspector, a classer, is placed on general duty to assist the District Inspector in testing the measurement work done by Circle Inspectors and for the disposal of difficult or intricate cases. In Belgaum the General Duty Inspector was utilized specially to measure the lands taken up by two roads. The temptation to use this Inspector for clerical duties proved too great in some districts. This, however, is not likely to recur, for, the exact duties on which the General Duty Inspector is to be employed are now distinctly laid down.

11. I have received from each district a return, in the form prescribed in Government Resolution No. 5671 of 12th July 1892, showing the amount of village inspection performed by Sub-divisional Officers and Mámlatdárs. This return is exactly what the Collectors require to keep themselves systematically informed as to the working of the staff, as disclosed by the test taken and remarks on the return; but for the purposes of my report the form is wanting in that it does not show how far the inspection was a test of the work done by the Inspectors. A slight amplification of the form will make it most useful in this direction, and this amplification I have recommended to the Commissioners. At the end of this section will be quoted the opinions of the Collectors regarding the working of the staff, based, no doubt, largely on the inspection returns from Assistants; I can only say here that, as far as I can judge, the Assistant Collectors and Mámlatdárs have performed a large amount of village inspection, which must have a most beneficial effect in encouraging exertion and checking idleness and fudging.

12. Both of the Divisional Inspectors have conducted the very large duties imposed on them with much energy and judgment. But their charges are too large. I have consistently urged that to do justice to the work there should be at least five Divisional Inspectors in the Presidency, or three for the charge now allotted to two, with prospective increase of two more when the surveys of Gujarát and the Konkan have been completed. As it is, the test of measurement work devolves almost entirely on the District Inspectors, who themselves are and will always be learners for the most part, and the supervision of Mámlatdárs in the matter of boundary-marks and encroachments cannot be so thorough as is requisite when it is borne in mind that on the upkeep of marks depends largely the success of the scheme for the abolition of the professional survey, and the substitution of a permanent establishment to maintain the field record unimpaired.

The following table shows that Messrs. Lushington and Young have been active. They have visited at least two tálukas in each district, and have thoroughly examined the work done at each of the District Survey offices. They did not find time to take adequate field test of the measurements done, though pains were taken to exercise a check by systematic scrutiny of the papers showing the tests made by District Inspectors:—

| District. | Number of Ta'lukas. | | Total Number of Circles. | Daftars examined. | Crop Waste and Boundary-mark Inspection. | | Complete Boundary-mark Inspection. | | Measuring. | | Annual Census tested (number of entries). | Birth and Death Registers (number of tested entries.) | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total. | Visited. | | | In how many Circles. | Survey Numbers tested. | In how many Circles. | Marks tested. | In how many Circles. | Survey Number tested. | | | |
| Dhárwár ... ... ... | 11 | 2 | 28 | 3 | 1 | 5 | 1 | 181 | ... | ... | ... | ... | |
| Bijápur ... ... ... ... | 8 | 4 | 24 | 10 | 7 | 43 | ... | ... | ... | ... | ... | ... | |
| Belgaum ... ... ... | 7 | 3 | 24 | 7 | 4 | 23 | ... | ... | ... | ... | ... | ... | |
| Kánara ... ... ... ... | 8 | 4 | 23 | 19 | 6 | 41 | 10* | 1,119 | 4 | 5 | ... | ... | * *i. e.*, of 10 Circle Inspectors, as all worked in one táluka. |
| Ratnágiri ... ... ... | 9 | 2 | 6 | 8 | 4 | 17 | ... | ... | 1 | 6 | ... | ... | |
| Total current year ... | 43 | 15 | 105 | 47 | 22 | 129 | 11 | 1,300 | 5 | 11 | ... | ... | |
| Total last year ... | 43 | 19 | 126 | 43 | 15 | 80 | 5 | 920 | 5 | 6 | ... | ... | |
| Khándesh ... ... ... | 16 | 2 | 43 | 5 | ... | ... | 2 | 160 | ... | ... | 9 | 9 | |
| Násik ... ... ... ... | 12 | 4 | 35 | 11 | ... | ... | 5 | 576 | 1 | 3 | 17 | 20 | |
| Ahmadnagar ... ... ... | 11 | 4 | 33 | 11 | 10 | 26 | 1 | 96 | ... | ... | 84 | 77 | |
| Poona ... ... ... ... | 8 | 3 | 23 | 6 | 5 | 47 | 1 | 30 | 2 | 2 | 51 | 51 | |
| Sholápur ... ... ... | 7 | 2 | 19 | 6 | 6 | 38 | ... | ... | ... | ... | 64 | 26 | |
| Sátára ... ... ... ... | 11 | 3 | 32 | 8 | ... | ... | 5 | 576 | 1 | 1 | 21 | 25 | |
| Total ... | 65 | 18 | 190 | 47 | 21 | 111 | 14 | 1,438 | 4 | 6 | 246 | 208 | |

These officers have under standing orders submitted from time to time the results of their field inspection and inspection of the survey records to the Collectors. The inspection reports are submitted through my office. The Collectors are thus kept informed, as far as possible, of the mistakes and irregularities detected, and presumably take action on the recommendations offered. It seems reasonable that, in cases of grave error or mistake reported, the Divisional Inspectors should know what action has been taken, and with this object in view a form of report of such specially important irregularities has been proposed, which will be returned to the Divisional Inspectors or other reporting officer (for the form may be usefully adopted by Sub-divisional Officers and Mámlatdárs) with intimation of the orders passed by the Collector.

The table above does not show the result of the inspections of survey offices, but the Divisional Inspectors are satisfied with the work done. The state of work in the District Survey offices will be noticed below.

13. *Check of the village census.*—This census under recent ruling of Government is now confined to agricultural stock, except where under special indent from the Survey Department a census of population is also needed for revision settlement reports, or where similar need arises for the settlement reports of Divisional Inspectors in districts with which the professional survey no longer has to deal.

It has been usual hitherto to insist on this check being exercised when the people and their cattle are mostly in their homes, *i. e.*, in the month of July. This rule is relaxed in the revised Rules for Circle Inspectors; and in districts or tracts where travelling in July is especially difficult on account of heavy rain or bad communications such check as is possible will be made at the time of the annual crop and waste inspection, with the sanction of the Collector.

The check of the village enumeration of stock was very fully made in most districts. In Sholápur nearly every village was visited.

In Násik and Belgaum the reasons for non-inspection of all villages have not been given.

Of the entries checked, on the average 84 per cent. were found correct, the percentage of correct entries varying from 77 to 89 per cent. This result seems over favourable.

The test is most difficult, and I should prefer to see a less area covered with more care in the scrutiny exercised.

Owing to leave taken by the District Inspectors, or illness or other urgent duty, their superior test was short. As far as it was accomplished it seems to show that the Inspectors had certainly not burked the disagreeable duty.

14. *Sanitary returns.*—As to the check exercised over the registrations of births and deaths and other vital statistics, the Sanitary Commissioner has expressed his satisfaction. This test is not made at any set period, but is exercised whenever an Inspector visits a village. Omissions and wrong entries are reported at once to the Deputy Sanitary Commissioners. All that need be said is that the supervision maintained over these important statistics is no longer nominal, as it was, and that it must result in more attention to the duty of prompt registration in the villages.

15. *Boundary-mark Inspection.*—Besides the attention paid to boundary marks during the crop and waste inspection, the Inspectors devote three months to a systematic inspection and repair of marks, village by village, not taking up the work in a new village till the village begun has been thoroughly completed. The scope of this inspection has been described in former reports, but it may be repeated that its object is to thoroughly deal with each village twice or thrice, during the currency of a lease, to maintain the field record up to date, so that at future revisions of rates no field work may be required. The inspection deals with marks defining roads, village site, public tanks and other Government waste,

out only extends to marks between survey numbers in occupation when the village officers cannot, without aid, fix the places of missing marks, or decide the correct position of disputed marks.

The number of villages in which this examination was completed during the year is marginally shown. In some districts the second inspection remains to be completed in the villages entered as complete. At that inspection, marks which were found in disrepair at the first inspection are repaired by the Inspector and the cost recovered from occupants; while at the first inspection, properly speaking, marks for the repair of which Government itself is responsible are immediately put in repair. This has not been the case, owing, I regret to have to report again, to the failure on the part of the Mámlatdárs to provide the Inspectors with the necessary funds to pay the cost of labour. This has been a difficulty and impediment to progress since I first organized the staff in Dhárwár. The rules under which the permanent advance to the Inspector should be promptly recouped have been more than once revised, and no account difficulty remains. As far as I can judge, there is no reason why this impediment should delay the Inspectors even one day.

| | |
|---|---|
| Dhárwár ... ... | 63 |
| Bijápur ... ... | 62 |
| Belgaum ... ... | 80 |
| Kánara ... ... | 107 |
| Khándesh ... ... | 574 |
| Násik ... ... ... | 288 |
| Ahmadnagar ... ... | 132 |
| Poona ... ... ... | 87 |
| Sholápur ... ... | 96 |
| Sátára ... ... | 232 |

The boundary-mark examination now under review has been carried on in the earlier equipped districts for some years. The progress to date in those districts is shown marginally.

| | |
|---|---|
| Dhárwár ... .. | 531 |
| Bijápur ... ... | 607 |
| Belgaum ... ... | 132 |
| Kánára ... ... | 168 |

In the newly equipped districts the reported outturn of work points to some misconception. Making every allowance for the presumably fair condition of the field record in districts where the revision survey has been recently introduced, it cannot be credited that on the average the Khándesh Inspectors completed the inspection in as thorough a manner as is absolutely necessary in twelve villages each. This comment applies to Sátára, Násik and Ahmadnagar also. It will be necessary that the Divisional Inspector should test the work in these districts and make a special report.

In Kánara the outturn is specially large, because the Inspectors of the district were massed in the Haliyál Táluka, where revision of rates is due, and where the field record has been neglected for years. Under close supervision the outturn was 139 marks per day per Inspector. Elsewhere the outturn varied from 65 marks in Poona to 100 in Dhárwár. The standard proposed was 200 a day, which is perhaps excessive, when it is borne in mind that till Inspectors master the intricacies of boundary-mark demarcation, much doubt and perplexity retard progress. Here again thoroughness and not pace is desirable, and during the inspection, cases demanding much enquiry must arise, where the District Inspectors would do well to check haste, to ensure proper disposal, provided idleness is also checked.

Out of 75 working days available, a standard of 50 actual days of inspection was only secured in Kánara and Belgaum. The shortness of the work in the Central Division was a natural result of the proportion of Inspectors new to the work.

The absolute necessity of this inspection is sufficiently shown by the following figures. In Sátára and Khándesh the recentness of the correction of the field record by the professional survey caused the percentage of marks in disrepair to be as low as 20 per cent., but in other districts the percentage rises as high as 50 per cent. The marks inspected are just those where a high percentage of disrepair might be expected.

Where the repair can be imposed on occupants, efforts are made to induce them to repair marks themselves rather than incur the larger cost when the repair is made by hired labour. In Bijápur 73 per cent. of such marks were repaired by occupants, and elsewhere the percentage was higher. It certainly should be higher everywhere, but here again the Inspectors are handicapped by want of funds to take prompt action on default of occupants which would ensure prompt disposal by the latter.

In the margin are shown the number of marks the replacement of which required re-measurement, and the number of encroachments on roads and other classes of Government waste brought to light. Here again the necessity of the work is proved. I lay stress on this, for in some quarters there appears to be a want of appreciation of the importance of the work imposed on the Inspectors in the matter.

| District. | Marks fixed by re-measurement. | Encroachments detected. |
|---|---|---|
| Dhárwár ... ... ... ... | 3,065 | 222 |
| Bijápur ... ... ... ... | 463 | 160 |
| Belgaum ... ... ... ... | 932 | 51 |
| Kánara ... ... ... ... | 1,147 | 55 |
| Khándesh ... ... ... ... | 54 | 111 |
| Násik .. ... ... ... ... | 281 | 437 |
| Ahmadnagar ... ... ... | 73 | 53 |
| Poona... ... ... ... ... | 89 | 120 |
| Sholápur ... ... ... ... | ..... | 55 |
| Sátára... ... ... ... ... | 55 | 584 |

**Measurement and classing work performed by Circle Inspectors.**

16. The nature of the work done under this head is shown in the following classified statement :—

| Classes of Cases. | Southern Division. | | | | Central Division. | | | |
|---|---|---|---|---|---|---|---|---|
| | Arrears on 31st July 1892. | New cases received. | Cases disposed of. | Balance on 31st July 1893. | Arrears on 31st July 1892. | New cases received. | Cases disposed of. | Balance on 31st July 1893. |
| 1. Partition of land under Court's decree ... ... | 18 | 189 | 187 | 20 | 12 | 185 | 164 | 33 |
| 2. Sub-divisions on applications of occupants duly sanctioned ... ... ... ... | 61 | 118 | 118 | 61 | 3 | 103 | 72 | 34 |
| 3. Disputes necessitating measurements of fields ... | 62 | 106 | 115 | 53 | 3 | 363 | 182 | 184 |
| 4. Disputes requiring fixing of marks by field books ... | 406 | 489 | 566 | 329 | 29 | 778 | 409 | 398 |
| 5. Encroachments ... ... | 247 | 535 | 566 | 216 | 3 | 665 | 516 | 152 |
| 6. Measurement of alterations caused by alluvion and diluvion ... ... ... | 99 | 168 | 161 | 106 | 1 | 85 | 57 | 29 |
| 7. Measurement of land required for public purposes— | | | | | | | | |
| (a) Burial ground ... | 64 | 128 | 135 | 57 | 1 | 31 | 26 | 6 |
| (b) Tanks ... ... ... | 6 | 21 | 18 | 9 | ... | 1 | 1 | ... |
| (c) Roads ... ... ... | 47 | 86 | 89 | 44 | 1 | 83 | 56 | 28 |
| (d) Dharmashálás and other public buildings. | 22 | 38 | 38 | 22 | 2 | 24 | 19 | 7 |
| 8. Measurement of land for building sites ... ... | 85 | 256 | 251 | 90 | 4 | 308 | 277 | 35 |
| 9. Reclassification of survey numbers ... ... ... | 1 | 2 | 3 | ... | 1 | 20 | 18 | 3 |
| 10. Miscellaneous ... ... | 276 | 594 | 625 | 245 | 54 | 1,853 | 1,407 | 500 |
| Total ... | 1,394 | 2,730 | 2,872 | 1,252 | 114 | 4,499 | 3,204 | 1,409 |

This, it will be remembered, is work which before the appointment of Circle Inspectors was performed by the Huzúr Surveyor assisted more or less by measurers and classers of the Survey Department told off temporarily or permanently to different districts. With the appointment of Circle Inspectors some classes of work naturally increased largely, for instance encroachments, for the Huzur Surveyor had no time to devote to the detection of encroachments. No doubt also cases of disputes between occupants have become more numerous from the knowledge that subordinates competent to settle disputes are available. It is probable that the head "Disputes requiring fixing of marks by field books" shows an increase which is partly due to the inexperience of many of the Circle Inspectors in measurement work, but it is also partly due to the more systematic attention paid to boundary marks, the supervision over which by the táluka staff was formerly extremely lax. The miscellaneous cases appear very numerous, but in the absence of explanation it is impossible to make any further comment. The small arrears in the Central Division are due to the recentness of the equipment of the districts of that Division. In the Southern Division some progress has been made in disposing of arrears, which still, however, are considerable. The work which is described in the above statement is necessarily done when the Inspectors visit villages for regular inspection duties.

The test of the work done by the Circle Inspectors in measurement and classification is one of the principal duties of the District Inspector, and it is satisfactory to note that, in the opinion of the Divisional Inspector, except in Khándesh and Násik, due attention has been paid by the District Inspectors. The District Inspectors of Dhárwár, Bijápur and Kánara have taken a larger test of measurement work than in the previous year, but the test was still insufficient, in

Bijápur especially. In Belgaum it was very unsatisfactory. The neglect in Khándesh and Násik has not been commented on by the Collectors.

*Miscellaneous work.*—In the table given below the work is classified as (1) cases prescribed by the Circle Inspector Rules and (2) those not prescribed :—

| Classes of Cases. | Southern Division. | | | | Central Division. | | | |
|---|---|---|---|---|---|---|---|---|
| | Arrears on 31st July 1892. | New cases received. | Cases disposed of. | Balance on 31st July 1893. | Arrears on 31st July 1892. | New cases received. | Cases disposed of | Balance on 31st July 1893. |
| (1) Prescribed by rules ... ... | 823 | 4,841 | 4,745 | 919 | 54 | 2,785 | 2,454 | 385 |
| (2) Not prescribed by rules ... | 131 | 1,042 | 1,083 | 0 | 3 | 1,388 | 1,250 | 141 |
| Total ... | 954 | 5,883 | 5,828 | 1,009 | 57 | 4,173 | 3,704 | 526 |

The returns received give no information as regards the nature of the work included under these two heads, which, however, appears exceedingly heavy; but it may be said generally that the miscellaneous cases prescribed by the rules are references from Mámlatdárs and other authority with respect to prescribed duties. The statement is made up from the monthly return (nikál patrak), which shows all references received, with date of receipt and disposal. It may be taken, then, that the figures show the correspondence work done by Circle Inspectors. It is otherwise as regards the sub-head "Miscellaneous Work not prescribed by the Rules." In spite of the stringent orders of Government and of the Collectors, Circle Inspectors are unauthorizedly utilized for the disposal of work which should not devolve on them at all. The most common classes of work thus unauthorizedly deputed to Circle Inspectors are the numerous miscellaneous auctions of wood, grass, &c., and the recording of statements by individuals required for the purposes of enquiries before the Mámlatdárs. In the Central Division these cases chiefly arose in the year under report before the receipt of a circular by the Collector strictly forbidding Mámlatdárs to employ Inspectors except on prescribed duties, but no such explanation can be given as regards the cases in the Southern Division. The duties of Inspectors are already quite as heavy as they can deal with, and there is no reason why Mámlatdárs should call in their aid, because though the system of bhág kárkuns or travelling members of the Mámlatdár's establishment has been abolished, the regular staff has been relieved by the addition of a large number of those who formerly were bhág kárkuns to strengthen the clerical staff, so that the Mámlatdár should have no difficulty in disposing of miscellaneous work of enquiries, petty auctions and the like, by sending out kárkuns as may be required.

The amount brought to credit on account of Circle Inspectors' pay and allowances while engaged on measurement work, the payment for which is recoverable under the Land Revenue Code from private individuals, is as follows :—Central Division, Rs. 981; Southern Division, Rs. 633.

*District Survey Offices.*

17. The following statement shows the progress made in the maintenance to date of the office record of changes in the field record :—

| District. | Number of cases received necessitating correction in Survey papers. | Number of Ákárbands | | Number of maps and field books corrected. | Number of extracts from field books sent to Circle Inspectors. | Number of extracts from Survey books supplied to Revenue officers and petitioners. | Number of maps supplied to village officers. |
|---|---|---|---|---|---|---|---|
| | | Corrected. | Remaining to be corrected on 1st August. | | | | |
| Dhárwár ... ... ... ... | 74 | 58 | ... | 483 | 1,025 | 1,012 | 166 |
| Bijápur ... ... ... ... | 45 | 46 | 2 | 368 | 357 | 33 | 125 |
| Belgaum ... ... ... ... | 27 | 48 | 18 | 129 | 795 | 156 | 50 |
| Kánara ... ... ... ... | 46 | 210 | 1,306 | 2,490 | 979 | 89 | 267 |
| Khándesh ... ... ... ... | 237 | 66 | 196 | 113 | 109 | 9 | ... |
| Násik ... ... ... ... | 155 | 49 | 222 | 94 | ... | 4,394 | 63 |
| Ahmednagar ... ... ... | 61 | 116 | 71 | 43 | 364 | 21 | 68 |
| Poona ... ... ... ... | 83 | 72 | 11 | 51 | 244 | 490 | 61 |
| Sholápur ... ... ... ... | 33 | 107 | 1 | 14 | 347 | 218 | 48 |
| Sátára ... ... ... ... | 50 | 48 | 2 | 48 | 92 | 84 | 3 |

A'kárband corrections exhibit good progress, except in Ahmadnagar, Násik, Khándesh and Kánara; but the work is especially heavy in Kánara, because the Forest Settlement Officer disposes of a large number of disforestment cases necessitating correction in the ákárband. This work has been retarded by the absence of jantris or calculation tables which have now been supplied by the Survey Department. Irrespective of this special class of work, the District Survey Office in Kánara has had an unusual amount of work which has been very satisfactorily dealt with. The large increase under column 6 is due to the progress of the boundary-mark inspection and the disposal of arrears of the past year. Receipts on account of fees are exhibited in the margin. There is a great want of uniformity of practice in the charges made at the District Survey offices. Uniformity will be secured when the proposed scale of fees now before Government has received sanction.

| Division. | Extracts from Survey papers supplied to applicants. | Extracts supplied to Circle Inspectors. | Village maps. | Fees for making corrections in Survey papers. | Total. |
|---|---|---|---|---|---|
| | Rs. a. p. | Rs. a. p. | Rs. a. p. | Rs. a. p. | Rs. a. p. |
| Central.. .. ... | 88 14 6 | 645 3 6 | 58 9 10 | 16 8 0 | 809 3 10 |
| Southern ... ... | 180 6 6 | 90 0 0 | 184 0 0 | ..... | 454 6 6 |

18. *Ratnágiri District.*—There are no village establishments in this district except in the two tálukas of Vengurla and Málvan. Six Circle Inspectors are regularly employed in these tálukas. The other twelve are employed on miscellaneous measurement and other original work in the district, but they were also from March to May utilized for the special test inspection of boundary marks required by Rule 104 of the Rules under Section 214 of the Land Revenue Code.

The amount of crop and waste inspection performed in Vengurla and Málvan is shown below:—

| Number of Villages in the Circles. | | Crop Inspection. | | Waste Inspection. | |
|---|---|---|---|---|---|
| | | Number and Area of Survey Numbers inspected. | | Number and Area of Survey Numbers inspected. | |
| Total. | Number inspected. | Number. | Area. | Number. | Area. |
| | | | Acres. | | Acres. |
| 69 | 55 | 1,071 | 4,851 | 37 | 382 |
| Percentages ... | 80 | 8·4 | 3·6 | 22 | 24 |

The Inspectors examined all the marks of the numbers dealt with at these inspections. In Government waste 150 encroachments were detected, of which only 24 had been duly reported by the village officers. Inspection was not done in 14 villages. The average daily outturn of work, which was from $2\frac{3}{4}$ to 5 survey numbers to each Inspector, is inadequate. The Collector's attention has already been directed to this point. The work of the village officers, as disclosed by the test made, seems even worse than last year. Boundary-mark inspection, described in paragraph 8 above, was commenced in 68 villages. The outturn of marks inspected was 64 daily per Inspector. 20 per cent. of the marks inspected were found out of repair or missing. At the second inspection, 95 per cent. of marks, found out of repair at the first inspection, were found duly repaired. During the boundary-mark inspection, measurement was required in 315 cases to fix missing marks, and 499 encroachments on roads, &c., were detected. The village census was checked in all the 10 villages of Vengurla but none of Málvan. 419 measurement cases were disposed of, as against 257 last year, in the whole district. The District Inspector tested the Circle Inspectors' work in at least two villages of each circle. His test was sufficient, and proved that the boundary-mark inspection done by Inspectors had been carefully made. He tested only 11 cases of

measurement work,—that is, 2 per cent. of the cases,—a test which is insufficient. The work done by the head-quarter office is shown below:—

| Number of cases received necessitating corrections in Survey records. | Number of Áka'rbands | | Number of maps and field books corrected. | Number of extracts from field books sent to Circle Inspectors. | Number of extracts from Survey books supplied to Revenue Officers and Petitioners. | Number of maps supplied to Village Officers. |
|---|---|---|---|---|---|---|
| | Corrected. | Remaining to be corrected on 1st August. | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 424 | 180 | 179 | 212 | 10 | 478 | 205 |

Some improvement over last year is evident. Rs. 329 were received on account of extracts of maps as against Rs. 121 last year. By recent sanction the number of Circle Inspectors will be increased from 18 to 26, which will bring the number nearly up to that which was originally proposed. With this staff some progress may be made in the collation of statistics, the Inspectors doing the work which in other districts is done by village officers. But, as I tried to make clear in a detailed note dated 19th March 1891, what is required for Ratnágiri is a considerable increase of Circle Inspectors over the allotment for other districts, to provide for the maintenance of the field record and for the collation of statistics. I endeavoured to show that, unless this or some similar plan is adopted, the finality of the present survey will be seriously imperilled, that there will be inadequate data for revisions of rates, and that the agricultural statistics of Ratnágiri will not be fit for inclusion in presidential returns. Moreover, I showed that the cost of this enlargement would still be below the percentage on gross revenue which the cost of táluka and village administration reaches in other districts.

19. I now append the remarks made by the Collectors on the working of the Kanungo staff during the year:—

*Dhárwár.*—"The results show the usefulness of these agricultural departmental subordinates and the altogether untrustworthy nature of the village officers' work. The test of the District Inspector and its results were close and satisfactory. On the whole, the work of the District and Circle Inspectors (so too the head-quarters office work) has been satisfactory in quantity and quality."

*Bijápur.*—"I have been quite satisfied with Mr. Náik's conduct of the duties. * * * I myself examined the work of 16 Circle Inspectors during the travelling season. I had to fine two, and have had one, whose appointment was sub. *pro tem.*, transferred to his substantive post of kárkun in the Divisional Inspector's office. With these exceptions the work (of Circle Inspectors) seemed to me to be satisfactory."

*Belgaum.*—"The Circle Inspectors were employed during the year on the duties prescribed under the rules, and the amount of work done is fair."

*Kánara.*—"The returns show that the Circle Inspectors in many cases still dislike their out-door duties, and that the minima of out-door inspection has not been performed. The amount of work done by the District Inspector was moderate. As far as I can judge, the work of the Circle Inspectors was moderate, and I am not prepared at present to think any very great improvement has been effected by their establishment, though probably they have been able to prevent some of the worst mistakes formerly made by the village officers."

*Khándesh.*—"We have not yet had sufficient experience of the Circle Inspectors to say positively how they work. The system has hardly got into full swing yet. There are a good many points as to procedure and as to scale of work that are only now getting settled. And the Assistant Collectors have not often found it possible to test the work done by the Inspectors. But it has, I believe, on the whole been fairly done. It has been shown, however, that revenue kárkuns do not do as Circle Inspectors: they have not the physique and they have not the training. Survey men are incomparably the best for the place. It has also been shown that the idea of the Mámlatdár's establishment being strengthened by the creation of a Circle Inspector establishment must be given up. And, lastly, there is, I think, reason to conclude that the ordinary revenue staff cannot supervise these Inspectors properly, and that the supervising staff will have in time to be strengthened."

*Násik.*—"The Circle Inspector's system is, on the whole, working well. The Divisional Inspector, Land Records and Agriculture, Central Division, speaks in favour-

able terms of the District Inspector. He visited the district twice. The introduction of the system affords little relief to the Mámlatdár's establishment. The District Inspector, Mr. Shesho Bálkrishna, is a capable man and is working well."

*Ahmadnagar.*—"The work done is satisfactory. The Collector would again observe that the District Inspector has done his portion of the work with energy."

*Poona.*—"As the undersigned was not here in the travelling season, he has seen nothing of the work of the Circle Inspectors.

"It is, however, clear from Mr. Padhye's report that the work is not only very distasteful to the Inspectors, but that the quantity hitherto expected from them is more than they can or will perform.

"It appears also to the undersigned that a mistake has been made in not allowing for the interruptions caused by rain, especially in the west of the district. It is unreasonable to expect men to go through the ordinary routine of many hours' exposure in the fields, or house visiting for census testing during pouring rain.

"This being so soon after the commencement of the system, criticism is hardly required, as in noting deficiencies it is hardly possible as yet to say whether what appears to be short work, &c., is due to faults on the part of the staff, or to the impossibility of doing all that is laid down as desirable.

"A few years' experience is necessary before the system can be reduced to smooth working. When the Inspectors have learned their work it is probable that they will be able to show more outturn, and the village officers also will learn to have their part of the work done in time.

"At present there appears to be considerable friction between the Inspectors and the village officers."

*Sholápur.*—"The system has worked well under the supervision of the District Inspector."

*Sátára.*—"The District Inspector, Mr. Kiráne, takes much interest in his work, and has exercised thorough supervision over his subordinates. The survey records' head-quarter office is also reported to have been managed ably and creditably."

In most cases these remarks come from the extracts from their administration reports forwarded by the Collectors for my information, but in some cases they were written in the endorsement forwarding the district returns.

It is not for me to pose as a champion for the special staff and combat all adverse remarks. I think I am as well informed as to its shortcomings as any one, and the Revenue Officers are as interested as I am to improve the special staff as far as possible. I am interested in that it is an essential link in the schemes which I have in my capacity of Director of Land Records initiated to carry out the trust imposed on me to make due provision for the maintenance of the survey record and for prompt revisions of rates when due.

A distaste for the arduous out-door duties of the special staff is clearly proved. This distaste is not conspicuous among Inspectors taken from the Survey rank and file, simply because their former duties were even more arduous, and the change has given many of them a guarantee of employment till pension is due. In most cases the transfer signified to them less work and more pay. On the other hand, the old bhág kárkuns now incorporated in the staff find that they have to account for their time. They were not accustomed to work under fear of test. They envy their fellow bhág kárkuns who were considered less qualified for hard out-door work, who are now in the Mámlatdár's office, with perhaps even better hope of promotion. I do not agree that as compared with the survey men, Inspectors from the revenue ranks are inferior in physique. If they are, the selection made was not right.

Without detracting from the special value which trained measurers certainly possess in contentment and special knowledge of one branch of the Inspector's duties, I do not think that it can be held that they would have even been eligible for the Circle Inspectors' posts if the original orders had been strictly construed. Those orders were that for the old class of bhág kárkuns "a better paid and better educated class" of men should be substituted. That has not been done. The survey measurer cannot claim to be better educated than the revenue kárkun who was selected for travelling duties. It cannot be said that the Circle Inspectors are better paid than the old bhág kárkuns were, and certainly

they have poorer prospects. The closure of the survey operations, setting free numerous men trained as measurers, and the acute financial crisis which existed when the staff was being organized, led to a reduction in the set standard. It is the insufficiency of inducement which is the chief reason for the distaste which has declared itself among the ranks of Circle Inspectors. It is not want of physique, and not the arduousness of the work.

Taking the men as they are, and not expecting miracles from them, I am of opinion that the results of the work of the year are not unsatisfactory. This is partly due to the good work done by the District Inspectors, to the energy of the Divisional Inspectors, and not least to the far greater attention paid by the Revenue officers.

It cannot be expected that crop registration will improve at once. The Inspectors see really a small percentage, and the only chance of improvement lies in their supervision, by virtue of which the village officers are now under fear of test, which they were not formerly. I believe that these do go into the field and make the inspection to the best of their knowledge. And I believe that formerly the inspection was not made, but that the figures were entered from verbal enquiry. If this improvement is made sure, there will still be error arising from the difficulty of apportioning the area in a field between the different crops on it, and in allotting a fairly correct area to fallow. This difficulty is greatest where crop mixtures are most common. In some provinces, out of Bombay, an attempt is made to make the apportionment at head-quarters by the help of set formulæ. In Bombay, mixtures are so variable that I believe that such an attempt would diminish, rather than increase, the general accuracy of the registration. In time the District Inspectors will under the guidance of the Divisional Inspectors be able to fix formulæ for some tracts or clusters of villages of like character, but this procedure demands caution.

Waste inspection is likewise improved, as is evidenced by the detection of numerous encroachments which village officers have failed to report, and which, therefore, formerly were never brought to light.

Boundary-mark inspection requires some technical knowledge, and a full acquaintance with the rules under which marks were put up. Such knowledge the old bhág kárkuns certainly did not possess, and in the case of disputed or missing marks they were helpless. As each revision survey took place, the marks were put in order; but in spite of the detailed orders of the rules under the Land Revenue Code requiring special inspection of all marks for 4 years after the introduction of a revision survey, and annual inspection afterwards of one-quarter of the marks by the táluka officers, *i.e.* by the bhág kárkuns, no attention was paid to marks, and they gradually deteriorated till the new arrangements were introduced, whereby steps to keep the field record correct to date have been taken. I am sure that any experienced Revenue officer will agree with me in saying that even if the bhág kárkuns did possess all the requisite knowledge, and also devotion to duty, the requirements of the Code rules are beyond the physical powers of the táluka staff. This was admitted on all sides. And when once admitted no responsibility was enforced, and the táluka inspection of marks consisted in entries in the village form, "marks correct" often all through and everywhere. I claim that what is now done, though it may be faulty and slow, is real progress in the correction of the field record, and that it will prevent the necessity of future field survey. This alone justifies the present system.

I need not refer to the other duties of the Inspectors, as Relief Inspectors in Famine, as measurers, or as compilers of statistical returns for present administrative use, and for use in framing of proposals for revisions of rates; but I must again refer to the practice, which still remains unchecked, of the use of Inspectors for work which is not their proper work: If this practice is not absolutely checked, the whole fabric will collapse. It is quite unreasonable for Mámlatdárs to act against the orders of Government; but the long experience I have had in the organization of the special staff, makes me believe that, unless every single infringement of the order by Mámlatdárs is not at once met by reprimand or other punishment, the Mámlatdárs will not reform. Experience has shown that, if a Mámlatdár succeeds in saving his office staff a visit to a village, he will attempt to do so again. Inspectors

are most convenient. One may just be close to a village where the Mám latdár wants some petty auctions made or the statements of half a dozen vi lagers recorded; and the temptation to use the Inspector is strong. Tl result is that his regular work is interfered with. The Mámlatdár, knowin that the fault is his and not the Inspector's, refrains from commenting in th diary on the shortness of the Inspector's work, and the Inspector naturall wishes to avoid the Mámlatdár's displeasure, and makes no appeal to the Sul divisional Officer. I make these comments to meet the statement, made by tl Collector of Khándesh, that the "idea that the Mámlatdár's establishment strengthened by the creation of the Circle Inspector establishment must be give up." It is not intended that all the outside duties of the Mámlatdár's offic should devolve on the Inspectors. But it was intended that with the introdu tion of the special staff, the strengthening of the Mámlatdár's staff should l secured. The financial pressure to which I have referred has not only operate in the introduction of a staff of lower status than was intended, but has als operated in diminishing the numbers of Inspectors, and so far the Collector remark is justified. The strengthening has not been sufficient. Nevertheless, can still be shown to have been considerable. To take the case of Khándesl there were formerly 62 bhág kárkuns for the conduct of all the outside duties c the táluka staff. Of these, 32 were made Circle Inspectors, and 16 new appoin ments were added to complete the staff, and 30 were added to the Mámlatdár clerical staff. All the important outside duties are imposed on the Inspector and in the Mámlatdár's office in the monsoon they compile the statistical retur of the táluka. If this still leaves the Mámlatdár unable to cope with his co respondence work and with the miscellaneous outside duties, the Collector clearly bound to make out a case for more clerks, but the Mámlatdár is n justified in imposing on Inspectors, duties not their legitimate duties.

The important question remains whether the present system of recruitmer of the special staff is in all respects satisfactory. Admissions are confined t measurers and classers from the Survey Department, and to selected revenue sub ordinates. The supply from the Survey Department will continue for some tim But the best revenue men cannot be secured. The special branch is a branch c the Department of Land Records and Agriculture. The agricultural element conspicuous by its absence. This is chiefly because the quality of the men from th Agricultural College is still very inferior. That supply has also practically cease Diplomates in agriculture will not take the posts without fair prospects of promotio and diplomates are scarce and will remain scarce till inducements to qualify for th diploma are more substantial. I have asked for permission to allow the Division Inspectors to employ candidates from outside who have qualified for, but hav not obtained admission to, the Revenue Department. These candidates will n have very bright prospects, but they will fill the places of temporary absentee when qualified, and may with training become useful acquisitions. I am co scious that this plan is not very sound, and that if not carefully worked it ma tend to lower the standard of Inspectors, though the special training the cand dates will receive will be a better school for many of the duties of the superic revenue staff than the clerical work of an office. I can only see one othe means of remedying the present unsatisfactory state of affairs. This is eithe to raise the pay of the Inspectors by allowing a larger number of appointment of the higher grades, or better, to raise the inducements to join the speci branch by keeping revenue kárkuns on the regular cadre, giving them a specia personal allowance of a substantial amount while employed on the duties c the special branch in which they should be retained as long as they are full efficient, or until entitled to promotion above the pay of the highest grade.

## II.—ANALYSIS OF DISTRICTS WITH REFERENCE TO SECURITY FROM FAMINE.

20. An important step has been effected towards a more detailed distric analysis than that contained in the Statistical Atlas of 1883.

The Circle Book has been sanctioned and distributed to all districts wher the staff of Circle Inspectors has been introduced. I took advantage of the recer

Simla Conference to compare this book with similar registers adopted in other Presidencies, and I am satisfied that it is not wanting in arrangement. Though it is primarily designed to make provision for the record required at periodical revisions of rates, and in this aspect takes its place beside the systematic record of rainfall and other statistics kept in my statistical office, it is precisely a collation of agricultural and economical statistics such as that required for the district analysis ordered by the Supreme Government on the recommendation of the Famine Commission in 1881, and exactly fills the want in this Presidency of ready means of rendering available the already full record, maintained in each village, of agricultural and economic facts, the possession of which ensures an adequate knowledge of the actual condition of the country, its population and resources.

III.—COLLECTION OF REVENUE AND RENTAL IN PRECARIOUS TRACTS.

21. By recent orders I include in this section some comment on the special measures taken during the year under the Famine Relief Code, and the ordinary measures for the collection of the land revenue in tracts classed in the Statistical Atlas as insecure. My rainfall analysis shows that the characteristic of the year, a heavy if somewhat unseasonable rainfall, obviated any necessity for action under the Famine Code. For the purposes of comment on the ordinary coercive measures the extent of which is some guide to the burden of the land assessment in precarious tracts, I have received extracts from the administration reports prepared by Collectors for submission to the Divisional Commissioners.

Without trespassing on the ground which will be covered by the Commissioners in their review thereof, I may say that though the number of notices issued is smaller than in the previous year in those districts of the Deccan and Karnátak where tracts have in the Statistical Atlas been classed as liable to famine, the special circumstances of the previous year make comparison unfruitful. In that year there was serious anxiety in both the Deccan and Karnátak, and pressure to collect the revenue was not permitted by the District Officers, so that notices were comparatively few. The cases in which a fine was levied under Section 148, Land Revenue Code, were in the year under report very few indeed—only 9 in the 8 districts which come under the specified category; but as this fine is by standing orders levied only when a rayat is known to be able to pay his assessment, and wilfully delays doing so, it has little bearing on the burden of revenue on insecure tracts.

There were, however, no less than 416 cases where moveables were distrained. Of these 92 occurred in Sátára, where the rainfall did special harm by its excessiveness. In all the cases the distraint was sufficient to induce payment, and was removed. It would seem that in this fertile district the defaulters were endeavouring to induce leniency which was proved undue and unnecessary. 313 cases are reported from the insecure district of Bijápur, which suffered considerably in the previous year. The Collector attributes the hesitation in payment, necessitating distraint, to the forbearance of the previous season. It was not necessitated by any failure of crops from which the assessment had to be met. The remaining 11 cases occurred elsewhere.

In 15 cases land was either forfeited or, after forfeiture, was sold for arrears. Of these 8 refer to the Deccan, and are all confined to one district (Násik). The circumstances are not described, but it may be noted that a sum equal to three times the Government assessment was realized in the sales. There were 7 other similar cases in Bijápur and Dhárwár.

These comments show that the revenue was realized with insignificant pressure.

IV.—MEASURES OF PROTECTION, including—

(1) *Fodder Reserves and Arboriculture.*

(2) *Extension of Communication.*

(3) *Irrigation.*

22. I have nothing to report under this head.

## V.—AGRICULTURAL EXPERIMENTS, INCLUDING FARMS.

### *A.—Experimental Farms.*

**Bhadgaon Farm.**

23. This farm has just been sold for a satisfactory sum. It measured 1,156 acres. Of that area 812 acres were originally transferred from Government waste for the use of the farm, and have been principally used as grass and hay land. The remainder was purchased from time to time from private occupants, often at a high price, for in this area not only was the land already cleared for cultivation, but there were several wells, which added to its value. It may be said that the sale price was equivalent to 25 times the assessment on the former area and to 40 times on the latter. Such a price is a proof, not merely of the increased value of land, but of the improvement made in it during its utilization as a Government farm. Live and dead stock fetched more than the last valuation made, and the standing crops, which under a favourable season were unusually fine, nearly as large a figure as the gross value of the crop of the previous year, though the purchaser bears the cost of harvest and the risk of untimely rain and the like. As to buildings, the total expenditure on new erection, renovation and repairs during the last 10 years came to Rs. 12,800. The farm buildings together with the bungalow, which originally (1883) cost Rs. 5,000, sold for over Rs. 11,000—a fair price. The whole farm was purchased by a capitalist, who intends to work it as a farm, though he may sublet portions from time to time.

The distribution of the whole price among the various heads stated above is, therefore, somewhat arbitrary, but special care has been taken, and I am satisfied that the distribution is right.

The reason why the farm was sold is, broadly speaking, its isolated inaccessible situation, but among other reasons were the failure of the Jámda Canal, the unhealthiness of the locality, and the great dearth of labour.

The sale-proceeds are in part available for the acquisition of land for another farm in a more suitable locality, and for the erection of farm buildings and for stocking. In all probability the new farm will be located in the neighbourhood of Surat.

As to the working of the farm in the year under report, I need only say that the kharif season was unfavourable; but the late crops were, partly on this account, good enough to show a profit, on the whole, of Rs. 6 per acre of cropped land, or nearly as large a profit as that shown on the average of the previous 5 years.

Little in the direction of new experiment was undertaken, pending the arrival of the Agricultural Chemist. That officer's aid will be sought elsewhere. The experiments made were chiefly those which have been carried on for a series of years. They may best be described in the following general remarks, which, I think, show what use the farm has served during the last decade:

It has taught us fully the local systems of cultivation, has in some respects shown that that system is improveable, and has given facts of agricultural value which could not have been otherwise obtained. We have demonstrated the benefit of selection of seed, a point to which local cultivators were and are inattentive, but to which more attention has been attracted, and it is not presumptuous to say that this is a lesson taught which will not be wholly forgotten.

We have proved that it is useless to innovate in implements, though we have found a place for improved sugarcane mills, for improved bullock hoes, and, within limitations, for the utilization of English ploughs. We have introduced from abroad as well as from other parts of India, and successfully grown, some new varieties of staple crops, *e. g.* the giant variety of bájri from Gujarát, cotton from Broach and elsewhere, new kinds of jowári, several varieties of wheat from various places, among which the Muzáffarnagar soft white has done very well, and potatoes, the future of which is hopeful.

We have thoroughly studied the merits and demerits of local and other cottons. It has been proved that American long-stapled varieties, though not

successful if sown at once as received from America, will succeed well if first acclimatized in Dhárwár, and that such cottons are very useful on light land. We have demonstrated the unwisdom of attempting to oust the local Varádi variety, but have helped the cultivators by placing at their disposal indigenous seed of this variety, improved by selection on the farm, which they have freely purchased. We have kept alive the Jari and Bani kinds of the Berárs. We have proved that the Government interference, which was once recommended to restrict the growth of indigenous inferior staples, is injudicious, because the climatic conditions suit the short-stapled varieties best.

Our continued trials of different wheats have shown that soft white wheat, with irrigation, not only succeeds well, but yields better than local hard varieties, and that though at first some deficiency of crop must be suffered, the soft kinds will hold their own, without risk of loss of consistency and colour. The trials have been sufficiently satisfactory to warrant a distribution of soft white seed among cultivators in the Tápti valley. If soft wheat finds a better market than hard, it is certain that it will be grown, and this may also be affirmed with regard to the long-stapled cottons.

We have saved the cultivator much by testing various exotics, often highly recommended, on the farm before allowing the rayat to run the risk of experiments doomed to failure. This was notably the case in respect to pedigree wheats from England and Australia.

Our stock-rearing has been the least successful venture, and has cost us more than any other class of trials; but we have shown that the Mysore breed, though very useful and lasting to a considerable age, cannot be stall-reared with profit. The strain has its merits, and will leave its stamp in the neighbourhood. We find that it is difficult to improve on the local breeds of sheep and goats. The Dumba of Sind soon deteriorates.

In the difficult question of crop diseases and insect attack we have proved the value of several specifics—in particular the sulphate of copper and carbolic acid pickles for smut, and bisulphide of carbon for weevil attack in stored grain.

We have demonstrated the unsoundness of the former encouragements given towards the growth of road-side trees in the midst of cultivation as a means of enlarging the area of tree-growth, and shown the direction in which such encouragement is safe.

We have learnt much regarding the effect of manures on black soil. The deduction drawn is a confirmation of a widespread belief as to the inexhaustible character of deep black land, and that on such land manure to a rabi crop does not pay either when the season is favourable or when it is unfavourable, the factors of rainfall or irrigation proving the more potent. We have demonstrated clearly the immense value, in India, of systematic green manuring, particularly with papilionaceous leguminous crops.

Lastly, the farm has largely increased our knowledge as to the adaptability of foreign systems and special practices, such as ensilage and hay-making, and has given us several well-trained native agricultural experts who will be utilized in the future under more favourable conditions. Mr. Mollison himself owes much of his present knowledge of Indian agriculture to the farm.

**Poona Farm.**

24. This farm is primarily intended as an instruction farm for the agricultural students of the College of Science, and this primary object has not been lost sight of. The Agricultural Department is even more interested than the Educational Department in the provision for practice with science. In devoting large attention to dairying and to the growth of fodder crops the utility of the farm for practical instruction has been considerably increased. If the students of the College do not take advantage of the full means at their disposal for the study of practical agriculture, it is because time spent in the acquirement of theoretical knowledge has been found by them of more value than that spent on the farm, for it cannot be denied that in the Diploma examination as yet too little

weight is given to practical knowledge. Perhaps this cannot be remedied, and it may have to be accepted that arrangements for practical instruction must be made either before the students go to College or after they have taken the diploma; for during their College course, even in the opinion of Mr. Mollison, who is their practical as well as theoretical instructor, they cannot be expected to give first attention to practice. I make these remarks chiefly in reference to the comments made by the Principal of the College in his annual report last year, reflecting on the management of the farm as an educational institution.

The farm is now in good hands, the manager having, after passing through the College course, served a full apprenticeship on the Bhadgaon Farm. It is, moreover, closely supervised by Mr. Mollison himself. Hitherto an annual report on the working of this farm has not been submitted to Government, but the work done on the farm is now so thorough and so instructive that I have decided to submit the report in print, and will here only notice, under standing orders, results of special interest which have been obtained during the year.

Last year various fodder crops were grown with the object of showing their comparative outturn, cost of cultivation and value of produce. This year the further steps have been taken (1) of practically testing their feeding value and (2) of studying various leguminous crops to be grown in rotation with cereal fodder crops. To the fodder crops tested last year were added maize, oats, two local varieties of jowári (sorghum vulgare), *viz.*, *nilva* and *sha'lu*, and a foreign variety, imphi (S. saccharatum). Oats and imphi were damaged by excessive rain. In point of merit, as adjudged by the amount of wastage in feeding, the crops are placed as follows:—1, guinea grass; 2, sundhia jowári; 3, shálu jowári; 4, nilva jowári. There was much wastage in Reana luxurians owing to its coarse fibrous stalks and still more in maize. Lucerne showed its already marked liability to disease; even when grown on the ridge and furrow system it was not safeguarded. Sulphate of copper in solution with lime had no effect in checking the disease. It has been again proved that the partiality shown by local cultivators to this crop is due to its high price and large yield in favourable seasons. Incidentally a result, which may prove itself important, was secured. A badly diseased patch of lucerne was interplanted with guinea grass. The lucerne recovered and grew well. This mixed crop corresponds somewhat to the rye grass and clover crop of England, a mixture that is of a cereal and leguminous fodder.

No fodder crop of the cereal order except guinea grass can be grown, except in rotation, and general experience points to the necessity of growing leguminous crops in rotation. On a dairy farm it is further an object to secure for the rotation a crop which gives good fodder. The leguminous crops tried were, besides lucerne already mentioned, *kulthi* (Dolichos uniflorus), *vál* (D. lablab), *chavli* (D. catiang), vetches and sainfoin. Little need be said as regards the last two; both failed; and less need be said as regards Lathyrus sylvestris, which was worse than a total failure, for it took up ground which might otherwise have been profitably utilized. The common peas of the locality were also tried unsuccessfully. The other pulses did well. Vál and chavli in good deep soil throve excellently, and though clearly better fodder than kulthi, the coarse stems of which are rejected by milch cattle, they will not grow on light soil as well as kulthi. *Kadwal* (or hot weather irrigated jowári of several varieties) was not tried again, the trial of last year proving it inferior to *sundhia*. Sundhia is a variety of jowári unknown in the Deccan. It is a rain crop, but also thrives well as an irrigated hot weather crop, and though it will not oust the local kadwal it seems likely to be a profitable introduction from Gujarát. I need not refer to the other results on the Poona Farm, except to say that rye was tried in the hope of proving its utility as a source of charcoal for gunpowder, for which the straw is largely used in England. It grew fairly, but instead of sending up straight shoots tillered freely, forming a thick sward. This trial is sufficient to show that, in Poona at all events, it cannot be made useful for the manufacture of gunpowder.

*The Dairy.*

25. In spite of famine rates for fodder in the early part of the year, the dairy herd yielded a very good profit, which would have been much larger had the

farm been provided with a grazing area for dry cows and young stock in a locality where they could be fed with greater economy. A suitable area has been selected about six miles off, the possession of which is very desirable. The detailed report shows the dairy record of all cows of different breeds from time of calving till they became dry. Such a record kept continuously will be of very great value. An addition to the herd was made by the purchase of some well-selected Sind cows. They have proved to be docile and very good milkers with a characteristic type and a breedy appearance.

Last year it was noticed that the percentage of butter fat in milk was greater in the hot weather than in other seasons. By giving green fodder throughout the year this difference has been greatly decreased. The Assistant Agricultural Chemist, who lectured to the students of the College during part of the rains, was good enough to make several important analyses of milk. At his next visit it is hoped that this study will be continued.

The new industry of dairying has continued to develop. The Bombay agent of the Dairy Supply Company has sold 47 more separators. A large dairy has been started at Hyderabad (Deccan). Some competition with the Dairy Supply Company by other similar companies has arisen. Separated milk now finds a ready demand. Cream separated from milk in Nadiád in Gujarát is largely taken by rail to Bombay to be made into butter, while the separated milk goes by rail in large quantities to Baroda and Ahmadabad. Butter made from Nadiád cream is sent from Bombay as far as Hyderabad. Incidentally an important success in keeping butter for a long period quite sound and fresh was secured. In April last, a considerable quantity of butter was salted with about 4 per cent. of good table salt and was packed in earthenware jars fitted with close-fitting lids. The intention was to sell this butter to District Officers in the fair season, but in July a sudden demand arose for fresh butter. The salted butter carefully washed to reduce the percentage of salt with the help of the butter-worker was found to be perfectly good, and equal to butter freshly made.

The number of private dairies has increased, and the Government dairy at Poona far from acting as a hindrance to private enterprise has taught a new industry which has already reached dimensions which were unanticipated.

The Ganeshkhind gardens, which form an adjunct to the Poona Dairy Farm, yielded a poorer crop of grass than usual. An attempt was made to make green hay, but the grass first cut was spoiled by untimely rain. The mango crop was also poor, but considerable extension of the mango plantation was made.

**Nadia'd Farm.**

26. An interesting account of the work of this farm will be published as an Appendix to the Poona Farm Report; but it may be noticed here that the Association succeeded in distributing selected seed from its seed store for 800 acres of land, or double the area of last year, which proves that its efforts in the distribution of seed are becoming more appreciated. American cotton failed, its yield as compared with Broach being 36 to 104 lbs. of clean cotton. There is nothing to encourage further attempts in Gujarát with exotic varieties of cotton. The farm is worked more systematically than hitherto, and with Mr. Mollison's help may secure useful results.

**Sind Farm (Hyderabad).**

27. This farm is under the management of the District Board, which, with the concurrence of this Department, proposes to convert it into a dairy farm.

**Empress Gardens.**

28. These gardens in Poona are now managed by the Agri-Horticultural Society with a grant-in-aid from Government (Rs. 3,000). The Society has spent Rs. 1,500 on permanent improvements, both with the object of improving the ornamental character of the garden and with that of introducing new varieties of fruit. A commencement in the resuscitation of the cultivation of the grape vine has been made. The net cost of the gardens (excluding the expenditure on

permanent improvements and a large prepayment (Rs. 600) for seed for next year) has been under Rs. 500. The Joint Secretaries, Messrs. Mollison and N. Padamji, have shown great interest in the management, and have received no small assistance from private members, among whom Colonel C. S. Sheppard may be specially mentioned. It is one of the objects of the present management by the Society to induce such assistance.

*B.—Experiments on various Indigenous and Exotic Products.*

29. A short note of agricultural work outside the farms may now be added:—

*Wheat.*—The demand for Muzáffarnagar wheat in parts of Sind has continued. Though the area under this wheat in the Nára valley has decreased by 1,300 acres, owing to prolonged floods and other causes, the percentage area under selected wheat on the total area of wheat is larger, *viz.* 18 per cent. as against 16 per cent. The outturn of imported wheat also has fallen from 526 to 314 lbs. per acre, but even this lower outturn is above the outturn of indigenous varieties. A further grant of Rs. 500 has been made for the importation of wheat seed and a new grant of Rs. 1,000 for the purchase of a variety of rape seed from Sonmiáni, which is superior to the local variety.

*Cotton.*—Acclimatized American cotton is being tried in Thar and Párkar and also in the Dhandhuka táluka of Ahmadabad by a private gentleman, who considers the results hopeful.

*Arrowroot.*—Mr. Gogte of Dápoli (Ratnágiri) continues his arrowroot cultivation. A trial shipment, noticed last year, to England induced a larger shipment of four tons this year, but the price of Bermuda arrowroot had in the meanwhile fallen to 5*d.* per lb., and the consignment was sold off at only a little above 1*d.* per lb. Nevertheless, the local demand has increased during the year, about 3,500 lbs. having been sold. Arrowroot is now used as a food on fast days.

*Strawberries.*—The Saháranpur strawberry has continued to thrive at Mahábaleshvar. 2,000 new plants were brought, and though they arrived late for the best results, the quality of the crop was very good.

*Indigo.*—Indigo was grown in Junágad again and also in Mahi Kántha.

*Date Palm.*—It does not seem necessary to note, in detail, the reports received from the numerous places to which seed was distributed. Of the 4 varieties of date palm, *viz.*, Tunisian, Djereed, Egyptian and Persian Gulf, the Djereed plantation in Sind seems to be especially flourishing. The road-side plantation in the Kotri táluka is expected to fruit next year.

*Divi-divi.*—The growth of divi-divi has not extended, and it does not seem necessary to refer again to this dye till results of interest have been secured.

*Sericulture.*—It is estimated that some 15,000 cocoons could be obtained from the forests of Thána only, at a cost of from 4 to 8 annas per 100. A trial consignment was sent to England through Messrs. David Sassoon & Co., but in London, Marseilles and Manchester the cocoons were practically unsaleable.

*Utilization of Bones.*—The export of bones from the port of Bombay has further increased during the year by 1,288 tons in quantity and by Rs. 27,000 in value, the total export having been 17,500 tons valued at Rs. 9,63,000.

*C.—Crop diseases and pests.*

**Potato disease.**

30. The prevalent disease in potatoes has already been noticed in paragraphs 41 and 36, respectively, of the reports for the last two years. A description of the disease and steps taken by this Department to check it were given in a separate note. As promised last year, a further note has been published which with the previous note has now been incorporated in the Imperial Agricultural Ledger Series No. 4. The disease has been studied in the Khed táluka, where perhaps the cultivators depend more on the potato than in any other part of the Presidency. The experiments made show that the Bouillie Bordelaise treatment, described in the note, of the land before it is planted, has proved effective in destroying the germs which the copper sulphate solution reaches. This solution in a large degree protects sound plants from infection. Inconclusive results were obtained

with caustic lime and soot, and the cultivation of the potato on ridges has not proved as beneficial as was expected. Though the disease can be checked by the use of the copper salt, it has been demonstrated that chief reliance must be placed on the distribution of robust seed of varieties experimentally proved to be able to resist the disease. Last year, as was reported, several very good varieties purchased from Messrs. Sutton and Sons, of Reading, gave most excellent results even in land full of the diseased germs, and a Government grant of Rs. 5,000 was made to import a considerable quantity in time for sowing this season. The necessity of ensuring the arrival of the seed potatoes by the 15th October had already been made evident. The seed (12 tons) came in time. Notice having been given of the intended importation, indents for double the quantity were received, but most unfortunately the seed tubers arrived in so unsound a condition that it was not considered safe to allow any distribution at all; but the eagerness with which indents have been made indicates the desirability of importing largely in future. The farms at Poona, Bhadgaon and Nadiád have been utilized to grow acclimatized seed for distribution at prices below that at which new seed can be imported. In this respect the results, except at Poona, have been unsatisfactory, but a considerable amount of seed has been distributed in Khed from Poona at the rate of Rs. 80 per ton, the local rate being between Rs. 40 and Rs. 48 per ton. The Khed cultivators prefer to purchase the seed grown at the farm than to pay Rs. 144 a ton for new seed. The difficulty of storage is considerable. This question is under investigation. The main crop is harvested in March and must be stored until June. During the hot weather it is difficult to keep stored potatoes sound. Long storage is avoided by sowing a late crop from seed just lifted, the produce of which is ready for the next year's early crop. Seedlings raised two years ago from the absolute seed of the potato plant are making satisfactory progress.

**Locusts, &c.**

31. Locusts have been noticed in one district or another of Sind almost throughout the year, though they have done little damage to crops. The Presidency Proper was free from their visitation. In two tálukas of Belgaum grasshoppers did some injury. Mr. Cotes, of the Indian Museum, identified the species as Hieroglyphus, which he states is a species which in past years has damaged rice, maize and other crops in their green stages not only in the Bombay Presidency, but in the Central Provinces and Madras. The insect belongs to the family of Acrididæ, to which also most of the destructive species of locusts belong, but, unlike these, it does not migrate in flights. It is distinct, then, from Acridium peregrinum, which has done so much harm recently in North-West India, and from Acridium succinctum, which ravaged the Deccan and Konkan in 1882-83. A single specimen of another Acridid grasshopper belonging to the species Pœcilocera picta was picked up in Káthiáwár. This insect has been harmful in previous years, but the damage done by it cannot be compared with that done by migratory locusts.

A cricket which attacked potatoes in the Karáchi district has been identified as the immature form of Liogryllus cimaculatus, which in March last attacked potatoes in Khándesh. It is common in the Poona district.

**Rat plague.**

32. Rats have caused considerable anxiety, appearing first, as they did, in the locality where they first appeared in 1878, that is in the eastern tálukas of Belgaum. They were reported also from Sind and the Deccan, but they did most harm in the Karnátak (Bijápur, Belgaum and Dhárwár).

The numbers, however, never became very numerous, and no special assistance from Government was required. Strong pressure was put upon the people to destroy them. The Divisional Inspector, S. D., made several tours of investigation. Destruction was most successfully effected by digging the rats out of their holes as during the plague of 1879, but in the Parasgad táluka the villagers devised a figure of 4 trap which was successfully used. But again as in 1879 the plague was stayed by opportune heavy rain and by an enormous increase of ticks, which appear to be the ordinary cattle ticks. It is still doubtful whether this parasite infested healthy rats, or whether it attacked them when weakened by

the heavy rain. A recommendation was made by this Department that the subject of rat-plagues should be recommended for study by the Imperial Bacteriologist in the hope that enquiry may show a means by which rats may be inoculated with a contagious disease not communicable to man or to domesticated stock.

*D.—Takávi advances.*

33. It seems desirable to show in a tabular form the progress of this valuable means of agricultural improvement :—

| Province. | 1891-92. | | | 1892-93. | | |
|---|---|---|---|---|---|---|
| | Under the the Land Improvement Act. | Under the Agriculturists' Loans Act. | Total. | Under the Land Improvement Act. | Under the Agriculturists' Loans Act. | Total. |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Gujarát ... | 27,865 | 13,183 | 41,048 | 20,140 | 9,329 | 29,469 |
| Deccan ... | 2,18,511 | 21,399 | 2,39,910 | 1,55,715 | 17,431 | 1,73,146 |
| Karnátak ... | 6,96,057 | 98,861 | 7,94,918 | 82,404 | 26,130 | 1,08,534 |
| Konkan ... | 18,950 | 1,635 | 20,585 | 31,213 | 4,100 | 35,313 |
| Sind ... ... | 26,508 | 84,809 | 1,11,317 | 35,925 | 1,05,190 | 1,41,115 |
| Total ... | 9,87,891 | 2,19,887 | 12,07,778 | 3,25,397 | 1,62,180 | 4,87,577 |

The amount given as takávi in 1891-92 was very unusual and was, as is known to Government, due to the widespread distress in the Deccan and Karnátak during that year, when the policy, strongly recommended in the Statistical Atlas of 1888, page 27, of making very liberal takávi advances in years of distress was generally adopted, and with marked success. Excluding this abnormal year it is worthy of notice that the takávi advances of 1892-93 were nearly double those of 1890-91, which again were double those of the year before. The progress, then, is steady and satisfactory, so much so that the demand has been greater than the sum allotted. The popularity of takávi advances in the five Divisions of the Presidency may be compared. GUJARA'T took the least advantage of the loans, an indication to some extent of the easy circumstances of the cultivating classes. In Gujarát a considerable sum was advanced in the Mehmádabad táluka to rayats who had suffered largely by the destructive floods of September 1892. The Collector of Broach recommends a reduction of the Government rate of interest, on the ground that private loans on land mortgage are given at a rate of interest lower than that required for takávi loans.

In Khándesh of the DECCAN, where the rainfall is generally sure, advances were mostly given to Bhils for seed. In Sholápur the two tálukas of Sángola and Málsiras, which have the most precarious rainfall in the district, absorbed three quarters of the advances. Throughout the Deccan the popularity of takávi shows marked increase. In the KARNA'TAK, where the system has been most popularized, the demand largely exceeded the allotment. In the KONKAN a new and satisfactory development is apparent. In Kánara considerable sums were taken for laying out new spice gardens after special assurance had been given by the Collector that such improvements would not entail liability to increased assessment at revision. In Kolába advances were largely utilized for field embankments, and in Thána advances were applied for for the conversion of dry-crop varkas into rice land. In Ratnágiri the khoti tenure seems fatal to improvement in this direction.

In SIND the advances under the Agriculturists' Loans Act were larger than those under the Land Improvement Act. Under the former Act the advances were used for canal clearances, but largely also for the purchase of seed. A large sum of Rs. 63,000 was advanced for seed in Karáchi, the special reason for which has not been reported.

Concurrently with the marked improvement above described it is satisfactory to notice that cases of misapplication of the loans have been very few, which is

an additional proof that the enlarged facilities for Government loans recently accorded have not been abused.

*E.—Improved Agricultural Implements.*

34. A plough manufactured at the Sibpore Government Farm, price Rs. 6-8, was tried at the Poona Farm and in the Broach district. The draft is light. It stirs rather than inverts the soil, and thus approaches the native implement in character. When the soil is in condition it does excellent work, but in moist soil too much earth clings to the mould board, and the plough cannot be used so soon after rain as a wooden plough. It is only suitable in light lands.

A grain-cleaning screen, made up from a diagram in Fream's Agricultural Text Book, was tried on the Bhadgaon Farm and was found useful in separating light grains and seeds of weeds. Its use will be considerable on Government seed farms. It is preferable to the ordinary type of winnower, in that, being wholly of iron, it does not so easily in hot weather get out of adjustment.

A private purchaser of one of Wood's mowers (last report, paragraph 40) in Belgaum was dissatisfied with its cost and its suitability on rugged ground.

*F.—Wheat and Cotton Trade.*

35. The trade in wheat shows a large fall, especially from Karáchi, due partly to unfavourable season and to the abundant supply from America in the European markets. The export of flour also fell, but it compares favourably with that of any year before 1891-92. In Europe, Belgium absorbed a considerable share of the exports of flour, but the export was mostly to Arabia, East Coast of Africa, Ceylon, Persia and Natal.

Anticipated deficiency in the American cotton crop sent up prices and exports, which, however, are still below the average of recent years. A further fall of 22 per cent. in exports to the United Kingdom and of 8 per cent. to Japan was more than counterbalanced by increased purchases on the European Continent, except in Belgium.

The import of American and Egyptian cotton for local manufacture of finer counts of yarn has increased, but is still small.

36. Forecasts of cotton and wheat, together with other staples in export demand, have been improved in form. On the whole the figures of area in forecasts show somewhat greater approach to the actuals returned in the detailed returns. The rapeseed forecasts were vitiated by the inclusion of jámbo (Eruca sativa) as rapeseed in Sind.

## VI.—HORSE AND CATTLE BREEDING AND VETERINARY ESTABLISHMENT.

*Civil Veterinary Department.*

37. The transfer of the Bacteriological Laboratory to Upper India having been decided on, the Imperial Bacteriologist has been administratively subordinated to the Inspector-General, Civil Veterinary Department. The Superintendent Bacteriological Survey under this arrangement becomes Assistant to that officer for the special duty of conducting the survey of cattle disease, with its cognate duty of publishing information collected in a popular form.

Thus Bombay loses one qualified Veterinary Officer, and the Superintendent, Civil Veterinary Department, is the only executive officer of the Department in this Presidency. His duties have been enlarged. Besides the primary duty of superintending horse and cattle-breeding, he is enjoined to give assistance to the Assistant to the Inspector-General, Civil Veterinary Department, in the collation and circulation of statistics of animal diseases and to give telegraphic notice to the Inspector-General of the outbreak of serious epidemics.

The duties thus imposed on Veterinary Captain Morgan are very much more extensive than those formerly performed by the Superintendent, Horse-breeding Operations. Not only has supervision of cattle-breeding been added, but assistance to the Imperial Civil Veterinary Department, and professional supervision of veteri-

nary grant-in-aid dispensaries. In the opinion of the Agricultural Department, either these duties should be lightened by the appointment of two Superintendents, or by the appointment of a qualified Assistant to the Superintendent. Till the special annual report of the Civil Veterinary Department, which is under consideration, has been finally prescribed, it falls to the province of this report to notice the various subjects included under the heading of this section. These will, it is hoped in future years be separately dealt with by the Superintendent, and submitted with the comments of the Director to Government.

*Horse-breeding.*

38 Government stallions have still further been reduced to 94, but the effective strength shows an improvement. Casualties are fewer than in the previous year. The cost of feeding is still large, only lower than the high figure of 1878-79. The number of mares covered has increased slightly, but the increase in branded mares is considerable, though the figure (929) is still below that (1,046) of 1890-91. Each stallion covered on an average 35 mares, while the number of foals produced per stallion was 14 as against 11 of the previous year. The ascertained percentages of unsuccessful coverings, abortions and deaths of foals are still high, and the record still incomplete. Efforts to improve the record by the institution of suitable village registers are being made.

The number of remounts purchased rose from 435 to 555—a satisfactory increase. The number of castrations of inferior animals remains stationary.

Mule-breeding is still practically confined to Sind, where owing to illness among the donkey stallions the number of coverings has fallen considerably. The fall in the number of mares covered per stallion is less marked; the number of foals per stallion has risen from under 5 to over 6.

*Veterinary Dispensaries.*

39 Satisfactory progress is still noticeable. New dispensaries have been opened at Shikárpur and Hyderabad, and sanction for the opening of a dispensary at Dhárwár has been given. Applications from Sholápur and Surat are under consideration. A check has been received owing to the difficulty of securing the services of qualified Veterinary Assistants. This difficulty has further prevented the filling of vacancies at Nadiád and Násik among itinerating Veterinary Assistants. The conversion of the College of Science Veterinary Hospital into a Veterinary Grant-in-aid Dispensary is delayed pending the decision on the question of locating the Bombay Veterinary College in Poona by transfer from Bombay. Reports have been received from 6 dispensaries which will be shortly reviewed. In all, 4,466 animals were treated, with the results shown below :—

| Year. | Number of Dispensaries open. | Total Animals treated. | Percentages shown on Total Animals treated. | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Cured. | Relieved. | Died. | Returned incurable. | Results unknown. | Remaining under treatment at end of year. |
| 1890-91 ... ... | 4 | 2,503 | 51·1 | 19·2 | 3·2 | 2·6 | 21·5 | 2·4 |
| 1891-92 ... ... | 4 | 2,628 | 54·0 | 16·3 | 2·9 | 2·8 | 21·6 | 2·4 |
| 1892-93. ... ... | 6 | 4,466 | 70·3 | 10·2 | 2·9 | 2·9 | 11·3 | 2·4 |

*Ahmadabad.*—Out-patients 821 ; in-patients 95. Slight decrease under the latter head due to absence on privilege leave of the Assistant in charge. Sir Dinshaw Maneckji Petit has generously, at the instance of local residents, granted a liberal sum for a new hospital and dispensary. The Committee has a considerable balance at its credit, and it is hoped will soon find it possible to entertain an itinerant Assistant. The dispensary has been well managed and has gained in popularity, as proved by the increase in subscriptions and number of

visits to private stables. The Assistant treats the animals in the Pinjrápole. Total receipts Rs. 2,352, including Pinjrápole contribution of Rs. 300; expenditure Rs. 1,401.

*Nadiád.*—Out-patients 1,131; in-patients 10. Among out-patients are included 36 animals treated in their villages for rinderpest and foot and mouth disease. The present want of accommodation for in-patients will be removed when the Sheppard Hospital for Animals, erected by the Desái family to commemorate the interest taken by Mr. G. F. Sheppard in all questions relating to agriculture in the Kaira district, is opened. The working of the dispensary was satisfactory. Receipts Rs. 1,728; expenditure Rs. 1,500. The itinerant Assistant resigned owing to ill-health in May, and as yet no successor has been found.

*Dhulia.*—Out-patients 700; in-patients 154. Increase satisfactory. The Assistant in charge was called out to deal with epidemics of rinderpest and foot and mouth disease. One case of glanders occurred. The post of itinerant Assistant is still vacant. Receipts Rs. 1,475; expenditure Rs. 1,300. The dispensary has a large credit balance of Rs. 1,800, and the Committee is anxious to secure an itinerant Assistant.

*Násik.*—Out-patients 331; in-patients 107,—that is, a considerable increase in the former with a slight decrease in the latter. There occurred a mild outbreak of foot and mouth disease and only one case of glanders. A Sir Dinshaw Maneckji Petit hospital and dispensary is about to be erected. The Committee is well supported by the local Society for the Prevention of Cruelty to Animals. Receipts Rs. 2,098; expenditure Rs. 1,229. The itinerant Assistant has obtained an appointment at the College of Science Hospital and has not yet been replaced.

*Belgaum.*—The dispensary was opened on the 1st April 1892. Out-patients 464; in-patients 29. Daily attendance rose from 3 in April to 19 in February. The Assistant performed 7 castrations. An itinerant Veterinary Assistant joined on the 1st December and treated in the villages 334 animals, mostly suffering from foot and mouth disease. Belgaum is thus the only district now provided with an itinerant Assistant besides the stationary Assistant in charge of the dispensary. Receipts Rs. 2,560; expenditure Rs. 2,410.

*Karáchi.*—Dispensary opened on the 10th October 1892. Out-patients 250; in-patients 40. The Assistant made an unusually large number of visits (227) to private stables and visited outbreaks of disease in the neighbourhood. Rinderpest, foot and mouth disease, and contagious pneumonia among camels and goats, were prevalent. No less than 12 cases of glanders were detected. In 9 cases the animals were destroyed, the other 3 died. The Glanders and Farcy Act has been extended to the town of Karáchi, the Veterinary Assistant being appointed Veterinary Surgeon under that Act. The dispensary was maintained by the District Local Board at a cost of Rs. 2,569.

By recent orders, rules for the inspection of grant-in-aid dispensaries have been prescribed, under which the Superintendent, Civil Veterinary Department, the Director of Agriculture, and the Superintendent of Farms have been appointed *ex-officio* inspecting officers for the Presidency, and the Collector, Superintendent of Police and Sub-divisional Officers for the district.

*Cattle Disease.*

40 The season reports published in the *Government Gazette* seem to give an incorrect idea of the year. From reports received from Collectors and veterinary dispensaries, rinderpest was prevalent in Khándesh, foot and mouth disease in Broach and other districts, anthrax in Kaira, and a disease, not identified, in Kolába. Even information thus received is incomplete and irregular and, on the initiation of this office, special forms to secure prompt and full reports of break of epidemic disease among cattle have been prescribed. These forms were sanctioned in July, and since that date by their means early intimation has been received of an outbreak of foot and mouth disease in Kánara (144 cases and 7 deaths); of an outbreak of rinderpest from Násik (14 cases with 3 deaths), and of an unknown disease in Kánara (5 cases with 3 deaths).

*Horse Shows, including Agricultural Shows and Exhibitions.*

41. The principal shows of the year were :—

| Province. | Place. | Kind of Show. | Date. | Prize Money. | Contributions. |
|---|---|---|---|---|---|
| | | | | Rs. | |
| Deccan ... ... | Ahmadnagar | Horse and Cattle Show and Agricultural Exhibition. | 7th—9th November 1892. | 1,865 Horses; 283 other animals; 300 Agricultural Products. | Government grant Rs. 2,000; Ahmadnagar and Poona District Local Boards Rs. 500 each; Their Excellencies the Governor and Commander-in-Chief Rs. 100 each. |
| Sind ... ... ... | Jacobabad ... | Horse Show ... | 9th—11th January 1893. | 4,485 | Government grant Rs. 2,000; District Local Board, Shikárpur, Rs. 2,500; District Local Board, Upper Sind Frontier, Rs. 1,200. |
| Southern Marátha Country. | Chinchli ... | Agricultural, Horse and Cattle Show. | 2nd—4th February 1893. | 2,327 Horses; 1,266 other animals; 576 Agricultural Products. | Kolhápur Darbár Rs. 2,000; Miraj (Junior) Rs. 1,000; Rámdurg Rs. 700; Sángli Rs. 600; Miraj (Senior) Rs. 500; other Chiéfs Rs. 1,005. |
| Gujarát ... ... | Ahmadabad... | Horse Show ... | 20th—23rd February 1893. | 1,789 | Government grant Rs. 1,000; His Highness the Gáekwár Rs. 500; Ahmadabad District Local Board Rs 500; other contributions Rs. 570. |
| Sind ... ... ... | Nausháhro ... | Horse and Cattle Show. | 23rd—24th February 1893. | 1,433 Horses; 317 Cattle. | Funds provided by Nausháhro Táluka Local Board. |

*Ahmadnagar Horse and Cattle Show and Agricultural Exhibition.*—The amalgamated Poona-Nagar Show was a decided advance in both number and quality of animals, as compared with former shows held at Ahmadnagar. The number of horse exhibits rose from 271 to 585, of which 336 were from Nagar and 212 from Poona. The rest hailed from Sholápur, Sátára and the States of Hyderabad and Phaltán. The classes for brood mares and young stock were specially commended for their excellence. Geldings were poorly represented. Only four animals were purchased for the Remount Rearing Depôt, because private dealers, who purchased at least 22 animals, paid higher prices than the Government agent could give.* The question of prohibiting the purchase, by Remount officers, of mares and fillies has again been raised. Only one mule was exhibited which indicates little progress in mule-breeding. The exhibits from Poona (chiefly from Bhimthadi and Sirúr tálukas), though fewer in number, carried off 40 prizes of the value of Rs. 1,070, as compared with 50 prizes, worth Rs. 780, awarded to the Ahmadnagar exhibits.

*The primary object of Government is to encourage the breeding of sound well-bred horses, and the better the prices the breeders obtain for their young stock, the more popular will horse-breeding become and the larger will be the production of sound well-bred young stock. Government will benefit by this in the end, even if it has to put up with some disappointment at first (Government Resolution No. 6902, dated 25th September 1893, Revenue Department, reviewing the Show Report.)

A decided improvement was visible in cattle, the total number of exhibits having risen from 124 to 417. The exhibits were chiefly from the Ahmadnagar District. Cattle cannot travel with the same ease as horses. The show cannot become attractive to distant cattle-breeders unless the prizes offered are considerably increased in value. Bullocks and milch buffaloes were particularly good. Most of the prize-winners were imported cattle. It is suggested that prizes should be restricted to those imported for *bonâ fide* stud purposes. Otherwise these prizes are a waste of money in no way tending towards the improvement of local breeds, which is their only legitimate object. Prize-winners were photographed. These photographs will be useful to judges and others in the future. The exhibition of agricultural products, except fruits and vegetables, which had been damaged by recent excessive rain, was much better than that of the previous year, and prizes to the amount of Rs. 300 were awarded.

The total expenditure amounted to Rs. 4,724 as against receipts of Rs. 3,393, and the deficit had to be met from the previous year's balance, which was reduced from Rs. 1,804 to Rs. 473.

*Sind Horse Show.*—This is the third show held at Jacobabad and eighth held in Sind. The number of horses exhibited (1,365) was about the same as at the last Jacobabad Show in 1891, but 50 per cent. more than at the Shikárpur Show of 1892. In point of quality, also, the results were more encouraging than even those of the Shikárpur Show, which was better than any former Sind Show. Out of 17 classes, the judges classed the following only as poor:—Fillies 3—4 years old by Government stallions, colts 3 years and under by Government stallions, geldings, donkey mares, and a section of the miscellaneous class. Eighty remounts at an average price of Rs. 231, 13 young stock for the Government nursery, and 34 mules were purchased by Government. More good remounts could have been sold had there been purchasers, and many, which were sold, failed to fetch their value. The number of mules exhibited was 98 against 168 last year, the highest on record. Many of the exhibits were too young for draft, and the proposal to utilize the mule-run at Jacobabad started by the 6th Cavalry as a nursery for young mules for the Commissariat Department is under consideration of Government in the Military Department. The number of geldings exhibited was 88 as against 28 and 41 of the past two years—a satisfactory evidence of progress made in the practice of castration in Sind.

The receipts were Rs. 5,700, of which Rs. 4,485 were given in prizes. Baluchi owners carried off more than half, while Shikárpur, which contributed Rs. 2,500 to the funds, only secured prizes to the amount of Rs. 540. Government has, however, declined to press the Quetta Agency for a contribution or to allow certain closed classes to keep out foreigners, on the ground that healthy rivalry is the best stimulus to improvement in horse-breeding. Baluchistán further holds its own show at Sibi, to which Sind horses are freely admitted. The proposal, mooted last year to locate the Sind Show permanently at Jacobabad has been relegated to future consideration. The explanation asked for as to the reason of the smaller numbers in the higher classes of fillies, as compared with those of the lower classes, has been variously given, the chief reasons assigned being either the loss or want of covering certificates, which necessitated the inclusion of the young stock in the miscellaneous class, and the larger range of age in the lower classes.

The Commissioner in Sind and the Agent to the Governor General at Quetta were present.

*Kolhápur and Southern Marátha Country Agriculturial Horse and Cattle Show.*—The census prevented a show in 1891, and failure of crops made it inadvisable to hold the show last year. The show of 1893 was graced by the presence of His Excellency the Governor. The exhibition was, on the whole, most satisfactory.

Exhibits numbered 651, including 237 horses. British districts exhibited 95 horses and about ⅓rd of other animals. Among horses, the young stock showed great promise, notably the three-year old fillies. Three animals, bred in British territory, by Government stallions were purchased for the Remount Rearing Depôt. Brood mares were decidedly good, but the best came from the British districts. It is undeniable that, in this part of the country outside of the Chiefs' stables, horse-breeding receives very scant attention. This need not be so, for the rayat breeds and rears the high class cattle of the Krishna valley and has favourable surroundings in soil and climate as favourable for horse-breeding. 128 prizes of the value of Rs. 2,327 were awarded.

For cattle there were 83 prizes, worth Rs. 1,138. The cattle classes were well filled. The Krishna valley breed was conspicuous. There was an inferior show of milch cattle. Agricultural implements and products (such as prepared bundles of aloe and plantain fibre, which were particularly good) were also exhibited. The Southern Marátha Chiefs and Sardárs contributed handsomely to the show, so that of a total expenditure of Rs. 7,825, only Rs. 2,000 fell on the Kolhápur Darbár.

*Ahmadabad Horse Show.*—This show was not successful. No remounts were found. Nearly ⅔th of the advertised prize money was withheld. The expenditure was only Rs. 3,098, and the closing balance was Rs. 3,500. The suggestion of establishing in Gujarát or Káthiáwár a nursery for the rearing of young stock in lieu of, or in addition to, a show is under consideration in the Military Department. The declining state of the Ahmadabad Show has also led Government to order enquiry into the present system of horse-breeding in Gujarát.

*Naushárro Horse and Cattle Show.*—This is a new and successful show started at the instance of Veterinary Captain Morgan, Superintendent, Civil Veterinary Department, for the benefit of Lower Sind, and funds were provided by re-appropriation in the Local Board budgets. The animals exhibited were 325 horses, 13 mules and 226 cattle. The number of prizes advertized was 82, but it was subsequently raised to 123, aggregating Rs. 1,750 in value. There was a strong muster of brood-mares and a fair entry of horses suitable for remounts. Oxen for agricultural purposes formed a very large class. On the other hand, geldings, mules, milch cows, and young stock were meagrely represented. The bullock class did not fill, the explanation being that castration of bulls is little practised on account of the docile tempers of the indigenous breeds. As to quality, the geldings (10 in number) formed the only class described as bad or indifferent. No purchases were made on the show ground.

## VII.—AGRICULTURAL STATISTICS.

### A.—RAINFALL.

42. The usual permanent record of rainfall in each district for settlement and administrative reference will be found in the appended tables (pp. i—xiii). The table below compares the rainfall at district head-quarters with the average fall and the fall of the preceding year :—

*Rainfall at District Head-quarters.*

| No. | | District Head-quarters. | Annual Rainfall ending 31st December. | | | | |
|---|---|---|---|---|---|---|---|
| | | | Average of eleven years ending 1892. | 1891. | | 1892. | |
| | | | | Fall. | Rainy days. | Fall. | Rainy days. |
| | | | Inches. | Inches. | | Inches. | |
| 1 | Deccan. | Dhulia (Khándesh) ... | 27·61 | 24·58 | 34 | 27·87 | 49 |
| 2 | | Násik ... ... | 33·74 | 25·99 | 43 | 35·14 | 60 |
| 3 | | Ahmadnagar ... ... | 26·87 | 16·18 | 28 | 42·16 | 63 |
| 4 | | Poona ... ... | 36·60 | 18·68 | 42 | 45·19 | 57 |
| 5 | | Sholápur ... ... | 32·78 | 23·76 | 25 | 39·28 | 57 |
| 6 | | Sátára ... ... | 45·30 | 36·30 | 48 | 43·47 | 80 |
| 7 | Karná-tak. | Belgaum ... ... | 51·49 | 43·34 | 72 | 64·01 | 94 |
| 8 | | Bijápur ... ... | 26·68 | 13·70 | 31 | 35·37 | 63 |
| 9 | | Dhárwár ... ... | 33·19 | 27·84 | 61 | 37·26 | 68 |
| 10 | Konkan. | Kárwár (Kánara) ... | 129·20 | 82·28 | 102 | 154·56 | 130 |
| 11 | | Ratnágiri ... ... | 106·99 | 91·17 | 83 | 137·60 | 108 |
| 12 | | Alibág (Kolába) ... ... | 91·77 | 82·05 | 83 | 117·42 | 97 |
| 13 | | Thána ... ... | 102·50 | 99·35 | 84 | 131·62 | 100 |
| 14 | Gujará't. | Surat ... ... | 46·64 | 63·89 | 40 | 55·15 | 60 |
| 15 | | Broach ... ... | 39·71 | 58·64 | 38 | 39·12 | 52 |
| 16 | | Kaira ... ... | 38·02 | 28·27 | 26 | 58·45 | 47 |
| 17 | | Godhra (Panch Maháls) ... | 40·71 | 29·08 | 34 | 44·72 | 47 |
| 18 | | Ahmadabad ... ... | 27·95 | 25·59 | 20 | 51·18 | 48 |

The season may be described as one of heavy prolonged rainfall with excessive and untimely rain at the time of the kharíf harvest. The south-west

monsoon rain came early (27th May) on the littoral of the south Konkan; but its further progress was checked by cyclonic depressions off the west coast. The June rain thus came irregularly from the north-east. The monsoon did not set in till the second week of July. Late October rain was very excessive, except in Gujarát, and caused much damage, both to kharíf crops and to rabi seedlings.

*Deccan.*—Though the regular monsoon rain set in very late, heavy June showers were generally sufficient for the commencement of kharíf sowings. From July to September the rain was, on the whole, seasonable and sufficient, but at the end of October the Sváti rain was throughout excessive at kharif harvest time. The rabi crops which had been sown with ample moisture would have yielded a bumper harvest, but for unseasonable rain again at harvest time.

*Karnátak.*—The features were generally similar to those of the Deccan. The Sváti rain was even more pernicious, except in south Dhárwár.

*Konkan.*—The south-west monsoon broke early with heavy rain, and sowings commenced everywhere, but after-falls were deficient, and the young rice began to suffer. From July onward rain came seasonably, and the crops were thriving, till checked by the Sváti rain coming just as the early rice was being harvested and the late rice was ripening. However, this late rain did less injury than in the Deccan, and it was absent altogether or moderate and beneficial in north Thána and the above-ghát tálukas of Kánara.

*Gujarát.*—Kharif sowings commenced early after heavy antemonsoon showers, but were soon checked by a break which lasted till the second week of July. From that date rain came seasonably till the end of August, but it was excessive in early September. The rain in October was light, and though not useful but rather harmful to kharif crops, was favourable for rabi sowings.

**B.—AGRICULTURAL.**

*Government Resolution No. 6273, dated 30th August 1893, R. D.

43. The district price return has been modified* in the direction required (last report, paragraph 51), but the additional information under it cannot be given for the year under report.

†Government Resolution No. 6229, dated 2nd August 1892, R. D.

"Fallow"† details are, however, available for review this year, a supplemetary return to Agricultural Return No. 2 having been duly received from all districts outside Sind.

| District. | Date of receipt. |
|---|---|
| Khándesh ... | 16th September. |
| Thána... ... | 21st do. |
| Kánara ... | 25th do. |
| Ahmadabad ... | 25th do. |
| Násik... ... | 29th do. |
| Ratnágiri ... | 2nd October. |
| Upper Sind Frontier. | 18th do. |
| Thar and Párkar. | 18th do. |

The district agricultural returns were received somewhat more punctually. Delay occurred in the marginally named districts, which must entail delay not only in the submission of the compilation for the Presidency included in my report, but also in the submission of the General Administration Report. In Khándesh, Násik, Kánara and Ratnágiri, where these returns are now compiled by the Land Records and Agricultural staff, their submission should have been, at any rate, more punctual.

**Return No. I.—Area of available Statistics.**

44. This return shows the gross area of the Presidency, inclusive of villages held on various privileged tenures, but exclusive of feudatory and tributary States, to be 121,012 square miles, of which Sind occupies 46,645 square miles. This figure is only approximate, for in certain districts, notably in Sind, large tracts are unsurveyed, and areas are only estimated.

The gross area returned is less by 11 square miles in the Presidency Proper and greater by 1,333 square miles in Sind, as compared with last year. The principal cause of variation, out of Sind, is the ascertainment of more correct figures for alienated villages brought under survey; while in Sind, to the progress of the survey, is added a revised estimate of the unsurveyed area to reconcile it with the estimates included in the Imperial Census Report.

In one district (Ratnágiri) there is some uncertainty as to the number of villages, due to the inclusion of hamlets in one year and their exclusion in another. A reported increase of 67 villages in Sind is not explained.

The decrease in the number of villages and area for which agricultural statistics are returned, points to greater care in the exclusion of villages from which fairly trustworthy figures cannot be obtained, chiefly in Ratnágiri, where there are no village establishments. In Poona there is one newly reporting village, which has been surveyed at the instance of the alienee. The number of villages returning statistics in Sind has, on the other hand, increased largely. Government villages under special tenures and unsurveyed alienated villages chiefly make up the number of non-reporting villages.

**Return No. II.—Cultivated (*i.e.* Occupied) and Uncultivated (*i.e.* Unoccupied) Area.**

45. The table below exhibits the variations as compared with the previous year, except in the Province of Sind and the district of Ratnágiri, for which the comparison would be valueless owing to the changes above noticed in the reported area:—

PRESIDENCY PROPER (EXCLUDING RATNÁGIRI).

| Detail. | | Area in Acres (000 omitted.) | | Percentage Increase or Decrease. |
|---|---|---|---|---|
| | | 1891-92. | 1892-93. | |
| *A.—Cultivated Area.* | | | | |
| Gross cropped area ... ... ... | | 24,854 | 25,815 | + 3·8 |
| Cropped more than once ... ... | | 424 | 774 | + 82·5 |
| Net cropped area ... ... ... | | 24,430 | 25,041 | + 2·5 |
| Current fallows ... ... ... | | 5,173 | 4,632 | —10·4 |
| | Assessed ... | 29,522 | 29,584 | + 0·2 |
| | Unassessed ... | 81 | 89 | + 9·8 |
| | Total A ... | 29,603 | 29,673 | + 0·2 |
| *B.—Uncultivated Area.* | | | | |
| Available for cultivation ... | Assessed ... | 1,226 | 1,128 | — 8·0 |
| | Unassessed ... | 835 | 754 | — 9·7 |
| Not available for cultivation. | Forest ... | 6,750 | 6,763 | + 0·1 |
| | Other ... | 5,029 | 5,073 | + 0·8 |
| | Total B ... | 13,840 | 13,718 | + 0·9 |
| | Grand Total ... | 43,443 | 43,391 | — 0·1 |

In the margin a comparison, district by district, is instituted, mainly to show variations in the cropped area. Such variations are due to season, except in so far as the figures (under current fallow, chiefly) have been altered by adjustments. But for such adjustments and variations in the area of available statistics, column 4 of the table should show precisely the extent of new land occupied in the year or thrown out of occupation by resignation. The reports received do not enable me to show exactly how far the difference is due to the last named factors. As to adjustments, it is reported from Belgaum that about 29,000 acres, or nearly the total net difference shown in column 4, are due to adjustment. This, being unoccupied land in alienated villages, had been before erroneously

| District. | (000 omitted.) | | |
|---|---|---|---|
| | Net Area cropped. | Current Fallows. | Cultivated, *i. e.* occupied Land. |
| Ahmadabad ... ... ... | +13 | —13 | +5 |
| Kaira ... ... ... ... | +7 | —1 | +6 |
| Panch Maháls ... ... | +12 | —4 | +8 |
| Broach ... ... ... ... | —23 | +25 | +2 |
| Surat ... ... ... ... | +2 | —2 | ..... |
| Khándesh ... ... ... | +6 | +1 | +7 |
| Násik ... ... ... ... | ..... | +12 | +12 |
| Ahmadnagar ... ... ... | —27 | +36 | +9 |
| Poona ... ... ... ... | —6 | +16 | +10 |
| Sholápur ... ... ... | —18 | +22 | +4 |
| Sátára ... ... ... ... | —32 | +25 | —7 |
| Belgaum ... ... ... | +100 | —68 | +32 |
| Bijápur ... ... ... | +114 | —109 | +5 |
| Dhárwár ... ... ... | +459 | —459 | ..... |
| Thána ... ... ... ... | —4 | —21 | —25 |
| Kánara... ... ... ... | ..... | +2 | +2 |

treated as "unoccupied" land. It is unoccupied in the sense that the alienee has no tenant for it, but is occupied in the sense that Government has a tenant, *viz.*, the alienee. It is now shown under "current fallow," the decrease in which is, therefore, diminished to 68,000 from 97,000 acres, as the figure would otherwise have stood.

In Thána, where the difference is also large, one reason is the exclusion of six alienated villages from the reporting area. This only accounts for a difference of 10,000 acres. An adjustment, similar to that described above under Belgaum, accounts for 8,000 acres more.

It is not the province of this report to deal minutely with increased or decreased occupation. That subject will be fully dealt with by the Commissioners in their Jamábandi Reports. The most striking contrast is that in the three Karnátak districts where the drought last season reduced the cropped area by a figure nearly as large as that by which it is increased under a more favourable season this year. In Broach the excessive July rain reduced the area of cotton, and perhaps some cotton land remained uncropped. In Sholápur, Sátára and Poona the decrease is due to excessive rain at rabi-sowing time. In Ahmadnagar it is nominal, due to incorrect inclusion of fallow in cropped land last year. The noteworthy increase in land cropped more than once, though attributable principally to the moisture left by heavy rain enabling an extension of late second crops, is also probably partly due to more attention to the registration of second crops.

46. The following is the summarized information afforded by the new fallow return:—

*Details of Current Fallow (Percentages).*

| Province. | Total fallow on occupied area. | Fallow on total Fallow. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Fallow in rotation. | Grass land. | Grass-bound land. | Ráb land. | Land unsown on account of season. | Other fallow. |
| Gujarát ... ... | 21·94 | 10·72 | 31·97 | 2·02 | ... | 3·32 | 51·97 |
| Deccan... ... ... | 12·08 | 28·44 | 19·49 | 4·68 | 1·43 | 6·65 | 39·31 |
| Karnátak ... ... | 11·75 | 13·94 | 24·79 | 21·35 | 0·02 | 2·55 | 37·35 |
| Konkan (exclusive of Ratnágiri). | 44·9 | 32·55 | 22·33 | 4·92 | 28·69 | 1·01 | 10·50 |
| Total ... | 15·61 | 22·64 | 23·68 | 7·35 | 5·94 | 4·10 | 36·29 |

This is a new return, and its preparation does not appear correct. It was enjoined to show how far bare fallow in rotation is practised, how far the cultivators set apart occupied land for the growth of grass or for the production of ráb material, how far cultivable land is out of cultivation on account of deep rooted grasses, prickly-pear and the like, and, lastly, how far deficiency or excess of rain prevented sowing.

The extent of fallow under the miscellaneous head is manifestly incorrect, It is impossible to believe that half the fallow in Gujarát is other than the specified descriptions of fallow.

Nevertheless the table is interesting and instructive. It will serve for valuable comparison, when available for several years; and when acceptable as fairly correct, will be the basis of valuable deductions.

47. Under the head "Uncultivated" (*i.e.*, unoccupied) land, a decrease is noticeable in Belgaum, Násik, Khándesh and North Gujarát, which is due to reasons given above under changes in the cultivated or occupied area. In the Panch Mahâls a transfer from "Uncultivated" to "Forest" arises from an extension of Government forest. The fluctuations in the forest area are shown marginally. Disforestment is observable in three districts. On the whole, however, the area under forest has been enlarged by a net addition of 13,000 acres.

| District. | Acres (000 omitted). |
|---|---|
| Panch Mahâls .. .. .. | +43 |
| Khándesh .. .. .. | —42 |
| Kánara .. .. .. .. | +8 |
| Thána .. .. .. .. | —5 |
| Násik .. .. .. .. | +4 |
| Poona .. .. .. .. | +3 |
| Sátára .. .. .. .. | +3 |
| Bijápur .. .. .. | —2 |
| Kolába .. .. .. .. | +1 |

48. The present condition of each district is shown clearly by the table below, which is annually included in this report—not so much to indicate variations, though these are evident if the table of any year is compared with those of other years, as to show the gradually contracting margin for future occupation especially and the other main features of Returns Nos. 1 and 2 combined:—

| District. | Percentage on gross Areas for which Statistics are not available. | Percentage on Net Area for which Statistics are available, of Area. | | | | |
|---|---|---|---|---|---|---|
| | | Cultivated, *i.e.* occupied. | | Uncultivated, *i.e.* unoccupied. | | Forest. |
| | | Actually cropped. | Current fallows. | Available for cultivation. | Not available for cultivation. | |
| **A.—Presidency Proper.** | | | | | | |
| *I.—Gujarát.* | | | | | | |
| Ahmadabad ... ... | 1·0 | 58 | 20 | 3 | 18 | 1 |
| Kaira ... ... ... | 8·3 | 76 | 5 | 7 | 12 | ... |
| Panch Mahals ... ... | 12·7 | 39 | 16 | 14 | 9 | 22 |
| Broach ... ... ... | 2·0 | 63 | 8 | 3 | 26 | ... |
| Surat ... ... ... | 2·4 | 48 | 24 | 6 | 18 | 4 |
| Average ... 1892-93 ... | 4·4 | 57 | 16 | 6 | 17 | 4 |
| Average ... 1891-92 ... | 4·4 | 56 | 16 | 7 | 17 | 4 |
| *II.—Deccan.* | | | | | | |
| Khándesh ... ... | 10·5 | 60 | 3 | 15 | 12 | 10 |
| Násik ... ... ... | 4·3 | 57 | 8 | 4 | 9 | 22 |
| Ahmadnagar ... ... | 2·5 | 67 | 9 | 1 | 10 | 13 |
| Poona ... ... ... | 1·2 | 63 | 11 | ... | 12 | 14 |
| Sholápur ... ... ... | ... | 74 | 10 | 1 | 9 | 6 |
| Sátárá ... ... ... | 7·4 | 59 | 15 | 1 | 9 | 16 |
| Average ... 1892-93 ... | 4·8 | 63 | 9 | 5 | 10 | 13 |
| Average ... 1891-92 ... | 4·7 | 63 | 8 | 5 | 10 | 14 |
| *III.—Karnátak.* | | | | | | |
| Belgaum ... ... ... | 2·4 | 62 | 13 | 3 | 6 | 16 |
| Bijápur ... ... ... | 0·7 | 79 | 8 | 3 | 5 | 5 |
| Dhárwár ... ... ... | 2·5 | 72 | 8 | 3 | 7 | 10 |
| Average ... 1892-93 ... | 1·8 | 72 | 9 | 3 | 6 | 10 |
| Average ... 1891-92 ... | 1·8 | 65 | 16 | 3 | 6 | 10 |
| *IV.—Konkan.* | | | | | | |
| Thána ... ... ... | 3·1 | 21 | 21 | 6 | 31 | 21 |
| Kolába ... ... ... | 3·6 | 30 | 24 | 4 | 21 | 21 |
| Ratnágiri ... ... ... | 84·7 | 32 | 33 | ... | 32 | 3 |
| Kánara ... ... ... | ... | 9 | 4 | 2 | 8 | 77 |
| Average ... 1892-93 ... | 25·8 | 19 | 15 | 4 | 23 | 39 |
| Average ... 1891-92 ... | 23·3 | 19 | 16 | 4 | 20 | 41 |
| Average A. 1892-93 ... | 8·0 | 58 | 11 | 4 | 12 | 15 |
| Average A. 1891-92 ... | 7·5 | 56 | 12 | 5 | 12 | 15 |

| District. | Perentage on gross Areas for which Statistics are not available | Percentage on Net Area for which Statistics are available, of Area. | | | | |
|---|---|---|---|---|---|---|
| | | Cultivated, *i.e.* occupied. | | Uncultivated, *i.e.* unoccupied. | | Forest. |
| | | Actually cropped. | Current fallows. | Available for cultivation. | Not available for cultivation. | |
| B.—Sind. | | | | | | |
| Karáchi ... ... ... | 29·4 | 7 | 7 | 17 | 67 | 2 |
| Hyderabad ... ... | ... | 15 | 24 | 40 | 19 | 2 |
| Shikárpur ... ... | 2·1 | 19 | 17 | 43 | 15 | 6 |
| Upper Sind Frontier ... | 48·4 | 24 | 39 | 18 | 14 | 5 |
| Thar and Párkar ... ... | ... | 7 | 10 | 5 | 76 | 2 |
| Average B. 1892-93 ... | 11·9 | 12 | 15 | 23 | 47 | 3 |
| Average B. 1891-92 ... | 13·9 | 11 | 15 | 23 | 48 | 3 |
| Average for the Presidency ... 1892-93 ... | 9·5 | 40 | 12 | 12 | 25 | 11 |
| Average for the Presidency ... 1891-92 ... | 9·9 | 39 | 13 | 12 | 25 | 11 |

**Return No. III.—Crops.**

49. As a necessary result of the features of the rainfall already described, there is a large increase in the area sown. In exceptional cases, which will be specially noticed, the sowing rain was unfavourable. The increase is found both under food and non-food crops. All cereals, including early jowári, all pulses, and cotton show a considerable increase, while, on the other hand, there is a large decrease under late jowári and a small decrease under tobacco, sugarcane and oilseeds:—

*Table to show effect of season on area sown.*

Presidency Proper, excluding Ratna'giri.

| Crops. | Area in Acres (000 omitted). | | Increase per cent. | Decrease per cent. |
|---|---|---|---|---|
| | 1891-92. | 1892-93. | | |
| Jowári ... ... ... ... ... | 8,325 | 7,122 | ... | 14·5 |
| Bájri ... ... ... ... ... ... | 4,837 | 5,451 | 12·7 | ... |
| Paddy ... ... ... ... ... | 1,554 | 1,623 | 4·4 | ... |
| Wheat ... ... ... ... ... | 1,738 | 1,918 | 10·4 | ... |
| Others ... ... ... ... ... | 1,623 | 1,688 | 4·0 | ... |
| Total, Cereals ... | 18,077 | 17,802 | ... | 1·5 |
| Tur ... ... ... ... ... ... | 451 | 808 | 79·2 | ... |
| Gram ... ... ... ... ... ... | 617 | 762 | 23·5 | ... |
| Others ... ... ... ... ... | 1,109 | 1,631 | 47·1 | ... |
| Total, Pulses ... | 2,177 | 3,201 | 47·0 | ... |
| Tobacco ... ... ... ... ... | 76 | 68 | ... | 10·5 |
| Sugarcane ... ... ... ... ... | 75 | 68 | ... | 9·3 |
| Oil-seeds ... ... ... ... ... | 1,500 | 1,493 | ... | 0·5 |
| Cotton ... ... ... ... ... | 2,521 | 2,702 | 7·2 | ... |
| Food Crops, Total ... | 20,499 | 21,225 | 3·5 | ... |
| Non-Food Crops, Total ... | 4,355 | 4,590 | 5·4 | ... |
| Total Crops ... | 24,854 | 25,815 | 3·9 | ... |

**Jowári.**—Jowári is here divided into kharif and rabi jowári. The decrease in the total of the latter is more than counterbalanced by increase in the former, taken together with the increase in bájri. The early rains tempted large sowings of bájri or kharif jowári, especially in the Deccan and Karnátak, in preference to leaving the land for rabi. In this year the harvest result was unfortunate, and the selection would have been different had the rayats been able to forecast the injurious harvest rain.

| District. | Acres (000 omitted). | | |
|---|---|---|---|
| | Kharif. | Rabi. | Net variation. |
| Sholápur ... ... ... | +1 | —426 | —425 |
| Bijápur ... ... ... | +491 | —870 | —379 |
| Ahmadnagar ... ... | +4 | —233 | —229 |
| Poona ... ... ... | ... | —196 | —196 |
| Belgaum ... ... ... | +185 | —252 | —67 |
| Sátára ... ... .. | +17 | —47 | —30 |
| Násik ... ... ... | +37 | —46 | —9 |
| Broach ... ... ... | +3 | —12 | —9 |
| Kaira ... ... ... | —19 | +13 | —6 |
| Dhárwár ... ... ... | +160 | —29 | +131 |
| Ahmadabad .. ... | +10 | ... | +10 |

**Bájri.**—The large increase, chiefly noticeable in the south Deccan and Karnátak, has just been explained. The north Deccan districts show a small decrease, but this is simply because in these tracts early jowári is the early cereal and not bájri.

| District. | Acres (000 omitted). | District. | Acres (000 omitted). |
|---|---|---|---|
| Bijápur ... ... ... | +261 | Broach ... ... ... | +7 |
| Sholápur ... ... ... | +249 | Khándesh ... ... ... | —38 |
| Poona ... ... ... | +100 | Násik ... ... ... | —35 |
| Belgaum ... ... ... | +58 | Sátára ... ... ... | —35 |
| Ahmadabad ... ... | +46 | Kaira ... ... ... | —10 |
| Ahmadnagar ... ... | +12 | | |

**Paddy.**—The net increase is fairly distributed over all districts, being especially large in Ahmadabad (20,000) and Kaira (17,000), Bijápur (18,000) and Sholápur (7,000), where the rice is largely an irrigated crop and not a rain crop as in the Konkan and Ghát districts of heavy rain. Elsewhere the increase varies from one to four thousand acres. In a season of heavy early rainfall, tanks are full, and plentiful water is available in running streams, and thus rice is encouraged.

**Wheat.**—Wheat is a rabi crop. It shows a net increase of 10·4 per cent., specially noticeable in Ahmadabad and Dhárwár. In the former district the August rain was excessive for cotton, which, though there sown late, is still sown before wheat. Much land under cotton was swamped, and was, therefore, re-sown with wheat. In Dhárwár and elsewhere heavy late rains favoured the sowing of late wheat. Ahmadnagar is exceptional, because cotton, sown early, occupied much land, which but for promising early rain would have been kept for wheat.

| District. | Acres, 000 omitted). |
|---|---|
| Ahmadabad ... ... ... | +69 |
| Dhárwár ... ... ... | +64 |
| Poona ... ... ... ... | +23 |
| Surat ... ... ... ... | +11 |
| Broach ... ... ... ... | +9 |
| Panch Mahále ... ... | +8 |
| Sátára ... ... ... ... | +8 |
| Kaira ... ... ... ... | +5 |
| Ahmadnagar ... ... ... | —18 |

**Other Cereals.**—Other cereals give a net increase of 4 per cent.; the increase being specially large under vari and rála, early cereals, in tracts where the average rainfall is too great for jowári and bájri.

| Other Cereals. | Acres (000 omitted). | Other Cereals. | Acres (000 omitted). |
|---|---|---|---|
| Kodra ... ... ... | +12 | Barley ... ... ... | +5 |
| Ragi... ... ... ... | —21 | Maize ... ... ... | +6 |
| Vari ... ... ... ... | +25 | Others ... ... ... | +5 |
| Rala ... ... ... ... | +33 | | |

**Pulses.**—There is a net increase of 47 per cent., chiefly under tur (79 per cent.) and gram (23 per cent.) The increase is general and is due partly to favourable sowing rain, both for the early and late pulses, and in some degree to increased attention paid to registration of mixed crops and second crops under the introduction of the Circle Inspector Staff. The tendency on the part of the village officers is to allot too small a portion of area to the minor ingredients of the numerous crop-mixtures and to evade the late inspection, by which alone the area of late after-crops of pulses can be ascertained.

| District. | Acres (000 omitted). |
|---|---|
| *Tur.* | |
| Bijápur ... ... ... | +111 |
| Sholápur ... ... ... | +74 |
| Ahmadnagar ... ... | +51 |
| Belgaum ... ... ... | +28 |
| Poona ... ... ... | +25 |
| Dhárwár ... ... ... | +18 |
| Sátára ... ... ... | +17 |
| Khándesh ... ... ... | +16 |
| Násik ... ... ... | +9 |
| Surat ... ... ... | +5 |
| *Gram.* | |
| Poona ... ... ... | +29 |
| Násik ... ... ... | +24 |
| Kaira ... ... ... | +21 |
| Ahmadnagar ... ... | +21 |
| Ahmadabad ... ... | +18 |
| Khándesh ... ... ... | +16 |
| Belgaum ... ... ... | +9 |
| Dhárwár ... ... ... | +8 |
| Panch Mahále ... ... | +7 |
| Bijápur ... ... ... | —9 |

| District. | Acres. |
|---|---|
| Kaira... ... ... | — 2,577 |
| Khándesh ... .. | — 3,411 |
| Ahmadnagar ... | — 1,158 |
| Sholapur ... ... | — 1,479 |
| Belgaum ... ... | + 1,404 |
| Bijápur ... ... | + 948 |

**Tobacco.**—Tobacco gives again a decrease of 8,000 acres, or 10·5 per cent., which is chiefly found in Kaira and Khándesh. It is attributed to the excessive rain of August, which was unfavourable for tobacco sowing.

| Districs. | Acres. |
|---|---|
| Dhárwár ... ... | — 3,209 |
| Poona ... ... | — 1,748 |
| Belgaum ... ... | — 1,264 |
| Satára ... ... | — 926 |

**Sugarcane.**—The decrease (7,000 acres) is partly the natural result of larger growth of cane in the previous year (12,000 acres over 1890-91), for, usually the crop is grown in rotation. Further, the deficiency of last year's rain at the time when the now reported crop was planted, made growers cautious, and the bad season made capital scarce.

**Cotton.**—There is a large increase of 181,000 acres, or 7 per cent., bringing back the fall last year in the Karnátak owing to scanty rain. The large increase in Ahmadnagar, where cotton is grown as an early crop, has already been noticed under wheat. A similar, though smaller, increase appears in other Deccan districts. In Khándesh, however, where very early rain is required for cotton, the season was unsuitable, as was exemplified on the Government farm. In Gujarát, August rain both restricted sowings and entailed complete failure of cotton in much land, which, however, was immediately put under wheat.

| District. | Acres (000 omitted). |
|---|---|
| Dhárwár ... ... | + 116 |
| Bijapur ... ... | + 77 |
| Ahmadnagar ... | + 57 |
| Belgaum ... ... | + 38 |
| Sholapur ... ... | + 12 |
| Násik ... ... | + 9 |
| Poona ... ... | + 7 |
| Ahmadabad... ... | -- 123 |
| Broach ... . | — 22 |
| Khandesh ... ... | — 22 |
| Surat ... ... | — 14 |

**Oil-seeds.**—These show on the whole a net decrease of 0·5 per cent. There is a large increase under kharif crops of sesame and niger, which is counterbalanced by an equally large decrease under rabi crops of safflower and linseed. Linseed is largely grown with late jowári and wheat, as also safflower with the latter and its area is curtailed with that of safflower, because late jowári was displaced by bájri and early jowári.

| Oilseeds. | Acres (000 omitted). |
|---|---|
| Sesame ... ... | + 67 |
| Linseed ... ... | — 32 |
| Castor ... ... | + 4 |
| Safflower ... ... | — 66 |
| Niger ... ... | + 20 |
| Groundnut ... ... | — 3 |
| Others ... ... | + 3 |

Sesame and linseed have been specially dealt with in the forecasts. As these are specially important, the following detailed notice appears advisable :—

Under **Sesame** there is a net increase of 67,000 acres, or 29·5 per cent., a general decrease in Gujarát (—16,000) with a general increase in the Deccan and Karnátak (+84,000). In Gujarát the rain of September, in which month the crop is generally sown, was excessive, and the damaged crop had to be removed. Where sown with bájri it was crowded out by the luxuriance of the bájri crop, and at the inspection was rightly credited with a small area. Timely sowing rain following previous year's scarcity encouraged extended sowing in the Deccan and Karnátak.

**Linseed** is chiefly grown in the Deccan and Karnátak. A decreased area is chiefly attributed to the extended cultivation of kharif crop owing to favourable early rains which resulted in a general contraction of all rabi crops.

**Potato.**—The area under this crop is 8,700 acres against 9,800 acres of last year. The decrease of 1,100 is chiefly confined to Poona (990), and is no doubt due to the *Bángdi* or ring-disease noticed in paragraph 30 which has seriously checked the progress of potato cultivation.

**Green Fodder.**—Lucerne and hot weather jowári are the only two important crops under this head. The former is confined to Poona (425), Ahmadnagar (382), Thána (130) and Násik (66 acres). Hot weather jowári shows a small net decrease from 18,500 to 18,145 acres, the decrease (1,800) in Gujarát being counterbalanced by an equally large increase (1,900) in the Deccan.

**Kharif and Rabi Crops.**—The details given in the appended table show variations under kharif and rabi cereals and pulses :—

| Year. | Area in Acres (000 omitted). | | | |
|---|---|---|---|---|
| | Kharif. | | Rabi. | |
| | Cereals. | Pulses. | Cereals. | Pulses. |
| 1891-92 ... ... | 10,664 | 1,403 | 7,569 | 792 |
| 1892-93 ... ... | 12,246 | 2,235 | 5,655 | 980 |
| | + 1,582 | + 832 | − 1,914 | + 188 |

Detailed comment on particular crops has already explained the variations.

50. I now give the usual tables showing the distribution of crops. Statement A shows the distribution of the principal crops in each district. Sind is included in this statement. Statement B shows the proportion which the area of each crop in each district holds with respect to the gross area of that crop in the Presidency Proper:—

*A.—Distribution of Crops—Percentages shown on District Areas.*

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | Pulses. | Others. | Cotton. | Oilseeds. | Others. | Food Crops. | Non-food Crops. |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse Grains. | Others. | Total. | | | | | | | |
| 1 | 2. | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | **A.—Presidency Proper.** | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabád ... ... ... ... | 26 | 17 | 6 | 17 | 4 | 2 | 72 | 8 | 1 | 16 | 3 | ... | 81 | 19 |
| 2 | Kaira ... ... ... ... ... | 8 | 31 | 15 | 2 | 22 | 2 | 79 | 13 | 1 | 2 | 2 | 3 | 93 | 7 |
| 3 | Panch Maháls ... ... ... ... | 2 | 11 | 14 | 5 | 13 | 25 | 70 | 19 | ... | ... | 9 | 2 | 89 | 11 |
| 4 | Broach ... ... ... ... ... | 17 | 4 | 3 | 18 | 1 | ... | 43 | 12 | 3 | 39 | 2 | 1 | 58 | 42 |
| 5 | Surat ... ... ... ... ... | 22 | 1 | 19 | 8 | 9 | ... | 59 | 18 | 2 | 14 | 6 | 1 | 79 | 21 |
| | Average ... 1892-93 ... | 18 | 14 | 10 | 11 | 10 | 4 | 67 | 12 | 1 | 15 | 4 | 1 | 80 | 20 |
| | Average ... 1891-92 ... | 18 | 14 | 9 | 9 | 9 | 4 | 63 | 11 | 1 | 20 | 4 | 1 | 75 | 25 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... ... ... | 17 | 22 | 1 | 9 | 1 | ... | 50 | 9 | ... | 35 | 5 | 1 | 59 | 41 |
| 7 | Násik ... ... ... ... ... | 5 | 38 | 3 | 15 | 9 | ... | 70 | 14 | 1 | 3 | 11 | 1 | 85 | 15 |
| 8 | Ahmadnagar ... ... ... ... | 29 | 35 | ... | 8 | 2 | ... | 74 | 14 | 1 | 2 | 7 | 1 | 89 | 11 |
| 9 | Poona ... ... ... ... ... | 28 | 37 | 3 | 5 | 5 | 1 | 79 | 12 | 1 | ... | 7 | 1 | 92 | 8 |
| 10 | Sholápur ... ... ... ... ... | 48 | 26 | 1 | 3 | ... | 1 | 78 | 14 | ... | 1 | 10 | 2 | 87 | 13 |
| 11 | Sátára ... ... ... ... ... | 28 | 30 | 2 | 4 | 8 | 1 | 73 | 19 | 1 | ... | 5 | 2 | 93 | 7 |
| | Average ... 1892-93 ... | 26 | 30 | 2 | 7 | 4 | ... | 69 | 13 | 1 | 9 | 7 | 1 | 83 | 17 |
| | Average ... 1891-92 ... | 32 | 29 | 1 | 7 | 4 | 1 | 74 | 8 | 1 | 9 | 7 | 1 | 83 | 17 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... ... | 39 | 12 | 6 | 5 | 8 | ... | 70 | 14 | 1 | 8 | 4 | 3 | 85 | 15 |
| 13 | Bijápur ... ... ... ... ... | 50 | 15 | ... | 5 | 2 | ... | 72 | 11 | ... | 11 | 5 | 1 | 83 | 17 |
| 14 | Dharwár ... ... ... ... ... | 34 | ... | 7 | 10 | 8 | ... | 59 | 12 | 1 | 21 | 4 | 3 | 72 | 28 |
| | Average ... 1892-93 ... | 42 | 10 | 4 | 7 | 5 | ... | 68 | 11 | 1 | 13 | 5 | 2 | 80 | 20 |
| | Average ... 1891-92 ... | 42 | 5 | 5 | 6 | 6 | ... | 74 | 8 | 1 | 10 | 5 | 2 | 83 | 17 |
| | *IV. Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... ... | ... | ... | 64 | ... | 23 | ... | 86 | 8 | 1 | ... | 4 | 1 | 95 | 5 |
| 16 | Kolába ... ... ... ... ... | ... | ... | 59 | ... | 32 | ... | 91 | 6 | 1 | ... | 2 | ... | 98 | 2 |
| 17 | Ratnágiri ... ... ... ... ... | ... | ... | 34 | ... | 42 | ... | 76 | 11 | 5 | ... | 6 | 2 | 92 | 8 |
| 18 | Kánara ... ... ... ... ... | 1 | ... | 78 | ... | 2 | ... | 81 | 3 | 9 | ... | 1 | 6 | 93 | 7 |
| | Average ... 1892-93 ... | ... | ... | 62 | ... | 23 | ... | 85 | 7 | 3 | ... | 3 | 2 | 95 | 5 |
| | Average ... 1891-92 ... | ... | ... | 61 | ... | 25 | ... | 86 | 6 | 3 | ... | 3 | 2 | 95 | 5 |
| | Average A. ... 1892-93 ... | 28 | 21 | 6 | 7 | 6 | 1 | 69 | 12 | 1 | 10 | 6 | 2 | 82 | 18 |
| | Average A. ... 1891-92 ... | 33 | 19 | 7 | 7 | 6 | 1 | 73 | 9 | 1 | 10 | 6 | 1 | 83 | 17 |
| | **B.—SIND.** | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | 20 | 8 | 29 | 14 | ... | 4 | 75 | 6 | 2 | ... | 16 | 1 | 83 | 17 |
| 20 | Hyderabad ... ... ... ... ... | 10 | 39 | 18 | 7 | ... | 1 | 75 | 3 | 3 | 5 | 13 | 1 | 81 | 19 |
| 21 | Shikárpur ... ... ... ... ... | 24 | 2 | 20 | 31 | ... | 1 | 78 | 11 | 1 | ... | 9 | 1 | 90 | 10 |
| 22 | Upper Sind Frontier ... ... ... | 37 | 8 | 4 | 13 | ... | ... | 62 | 7 | 1 | ... | 30 | ... | 70 | 30 |
| 23 | Thar and Párkar ... ... ... ... | 1 | 71 | 15 | 4 | ... | ... | 91 | 1 | 2 | 3 | 3 | ... | 94 | 6 |
| | Average B... 1892-93 ... | 17 | 25 | 19 | 16 | ... | 1 | 78 | 6 | 2 | 2 | 11 | 1 | 86 | 14 |
| | Average B... 1891-92 ... | 15 | 24 | 23 | 14 | ... | 1 | 77 | 6 | 2 | 4 | 10 | 1 | 85 | 15 |
| | Average for the Presidency. 1892-93 ... | 26 | 22 | 8 | 8 | 5 | 1 | 70 | 12 | 1 | 9 | 6 | 2 | 83 | 17 |
| | Average for the Presidency. 1891-92 ... | 31 | 20 | 8 | 8 | 5 | 1 | 73 | 9 | 1 | 9 | 7 | 1 | 83 | 17 |

## B.—Distribution of Crops—Percentages shown on Presidency Area.

| No. | District. | Food Crops. | | | | | | | | | Non-food Crops. | | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cereals. | | | | | | | | | | | | | |
| | | Jowári. | Bájri. | Paddy. | Wheat. | Coarse Grains. | Others. | Total. | Pulses. | Others. | Cotton. | Oil-seeds. | Others. | Food Crops. | Non-food Crops. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 5·1 | 4·5 | 5·3 | 12·5 | 4·0 | 11·4 | 5·7 | 3·5 | 5·3 | 8·5 | 2·7 | 1·7 | 5·3 | 6·0 |
| 2 | Kaira ... ... ... ... | 0·9 | 4·2 | 6·7 | 0·9 | 10·7 | 3·1 | 3·3 | 3·0 | 3·3 | 0·4 | 1·0 | 6·0 | 3·3 | 1·1 |
| 3 | Panch Mahále ... ... ... | 0·1 | 0·9 | 3·5 | 1·2 | 3·8 | 46·6 | 1·7 | 2·6 | 0·6 | ... | 2·5 | 1·9 | 1·8 | 0·9 |
| 4 | Broach... ... ... ... | 1·4 | 0·4 | 1·2 | 5·3 | 0·6 | ... | 1·4 | 2·2 | 7·9 | 8·3 | 0·8 | 1·0 | 1·6 | 5·3 |
| 5 | Surat ... ... ... ... | 1·7 | 0·1 | 6·5 | 2·4 | 3·3 | 0·2 | 1·9 | 3·1 | 3·8 | 3·9 | 2·3 | 1·2 | 2·1 | 2·7 |
| | Total ... 1892-93 ... | 9·2 | 10·1 | 23·2 | 22·3 | 22·4 | 61·3 | 14·0 | 14·4 | 20·9 | 20·2 | 9·3 | 11·8 | 14·1 | 16·0 |
| | Total ... 1891-92 ... | 7·9 | 10·6 | 21·3 | 18·7 | 20·9 | 60·9 | 12·5 | 17·8 | 23·5 | 28·0 | 9·9 | 15·5 | 13·2 | 20·8 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | 7·5 | 12·3 | 1·7 | 13·7 | 1·5 | 2·3 | 8·5 | 8·7 | 4·6 | 39·7 | 9·9 | 9·5 | 8·6 | 27·4 |
| 7 | Násik ... ... ... ... | 1·4 | 14·5 | 3·2 | 16·6 | 13·0 | 2·3 | 8·2 | 9·0 | 8·2 | 2·2 | 15·7 | 3·9 | 8·4 | 6·8 |
| 8 | Ahmadnagar ... ... ... | 11·3 | 18·2 | 0·8 | 12·3 | 2·8 | 2·9 | 11·7 | 12·6 | 4·6 | 3·5 | 12·1 | 7·4 | 11·3 | 6·6 |
| 9 | Poona ... ... ... ... | 8·8 | 15·1 | 4·0 | 6·0 | 6·8 | 7·1 | 9·7 | 7·7 | 14·8 | 0·3 | 10·0 | 4·8 | 9·5 | 3·8 |
| 10 | Sholápur ... ... ... | 14·8 | 8·0 | 14·4 | 2·9 | 0·2 | 10·8 | 8·9 | 9·5 | 4·9 | 0·6 | 14·5 | 12·5 | 9·0 | 6·1 |
| 11 | Sátára ... ... ... ... | 7·1 | 10·0 | 2·3 | 3·2 | 9·2 | 9·4 | 7·4 | 10·8 | 9·9 | 0·2 | 5·9 | 9·6 | 8·0 | 2·9 |
| | Total ... 1892-93 ... | 50·9 | 78·1 | 13·4 | 54·7 | 33·5 | 34·8 | 54·8 | 58·3 | 44·0 | 46·5 | 68·1 | 47·7 | 56·8 | 53·6 |
| | Total ... 1891-92 ... | 54·2 | 82·8 | 12·9 | 59·7 | 34·4 | 34·8 | 56·8 | 55·0 | 42·2 | 47·4 | 68·8 | 43·7 | 56·4 | 54·5 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... | 9·8 | 3·8 | 6·8 | 4·3 | 10·1 | 3·4 | 7·0 | 7·7 | 3·7 | 5·4 | 4·5 | 12·8 | 7·2 | 5·7 |
| 13 | Bijápur ... ... ... | 19·9 | 7·9 | 0·8 | 7·6 | 3·1 | 0·5 | 11·5 | 9·2 | 3·4 | 11·6 | 10·2 | 4·9 | 11·1 | 10·6 |
| 14 | Dhárwár ... ... ... | 10·2 | 0·1 | 9·2 | 11·1 | 11·6 | ... | 7·1 | 7·8 | 5·6 | 16·3 | 5·7 | 15·9 | 7·2 | 12·8 |
| | Total ... 1892-93 ... | 39·9 | 11·8 | 16·8 | 23·0 | 24·8 | 3·9 | 25·6 | 24·7 | 17·7 | 33·3 | 20·4 | 33·6 | 25·5 | 29·1 |
| | Total ... 1891-92 ... | 37·9 | 6·6 | 16·5 | 21·6 | 22·5 | 4·3 | 24·5 | 23·4 | 17·4 | 24·6 | 18·9 | 32·8 | 24·3 | 23·3 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | ... | ... | 18·1 | ... | 6· | ... | 2·3 | 1·1 | 3·1 | ... | 1·1 | 1·9 | 2·1 | 0·6 |
| 16 | Kolába... ... ... ... | ... | ... | 14·1 | ... | 8·5 | ... | 2·1 | 0·8 | 1·3 | ... | 0·5 | 0·5 | 1·8 | 0·2 |
| 17 | Ratnágiri ... ... ... | ... | ... | 2·7 | ... | 3·6 | ... | 0·5 | 0·5 | 2·7 | ... | 0·5 | 0·6 | 0·6 | 6·2 |
| 18 | Kánara... ... ... ... | ... | ... | 11·7 | ... | 6·4 | ... | 2·1 | 0·2 | 10·3 | ... | 0·1 | 3·9 | 1·1 | 0·3 |
| | Total ... 1892-93 ... | ... | ... | 46·6 | ... | 19·3 | ... | 6·9 | 2·6 | 17·4 | ... | 2·2 | 6·9 | 5·6 | 1·3 |
| | Total ... 1891-92 ... | ... | ... | 49·3 | ... | 22·2 | ... | 6·2 | 3·8 | 16·9 | ... | 2·4 | 8·0 | 6·1 | 1·4 |
| | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

51. **Outturn of Crops.**—The following table gives the anna valuation of the outturn of the principal crops in each district. The valuation (by Mámlatdárs) purports to conform to the prescribed standard, *i. e.* 16 annas represent an average crop. The table must, however, be taken as representing a merely approximate estimate.

*Approximate Anna Valuation of Principal Crops in each District, 1892-93.*

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Ragi. | Vari. | Tur. | Gram. | Cotton. |
| | *Gujarát.* | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... ... | 7 | 7 | 12 | 11 | 9 | 6 | 12 | 11 | 11 | 9 |
| 2 | Kaira ... ... ... ... ... | 9 | 9 | 13 | 12 | 9 | 10 | 11 | 12 | 12 | 10 |
| 3 | Panch Mahále ... ... ... ... | 11 | 7 | 12 | 11 | 10 | 10 | 8 | 7 | 13 | 8 |
| 4 | Broach ... ... ... ... ... | 11 | 9 | 14 | 16 | 12 | ... | ... | 11 | 10 | 17 |
| 5 | Surat ... ... ... ... ... | 9 | 8 | 14 | 13 | 12 | 8 | 7 | 11 | 9 | 9 |
| | *Deccan.* | | | | | | | | | | |
| 6 | Khándesh ... ... ... ... | 10 | 14 | 12 | 12 | ... | 15 | ... | 11 | 11 | 9 |
| 7 | Násik ... ... ... ... ... | 13 | 11 | 13 | 13 | ... | 14 | 13 | 12 | 13 | 11 |
| 8 | Ahmadnagar ... ... ... ... | 10 | 11 | 11 | 13 | ... | ... | ... | 11 | 13 | 7 |
| 9 | Poona ... ... ... ... ... | 13 | 12 | 11 | 10 | 11 | 12 | 11 | 8 | 12 | 2 |
| 10 | Sholápur ... ... ... ... | 11 | 8 | 10 | 11 | 4 | 2 | 11 | 8 | 9 | 5 |
| 11 | Sátára ... ... ... ... ... | 9 | 9 | 12 | 9 | 7 | 11 | 10 | 9 | 12 | 8 |

* Maize.

| No. | District. | Average Anna Valuation. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jowári. | Bájri. | Paddy. | Wheat. | Kodra. | Ragi. | Vari. | Tur. | Gram. | Cotton. |
| | *Karnátak.* | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 10 | 13 | 14 | 11 | 8 | 9 | 10 | 9 | 12 | 13 |
| 13 | Bijapur ... ... ... ... ... | 7 | 9 | 9 | 10 | ... | .... | ... | 6 | 8 | 10 |
| 14 | Dhárwár ... ... ... ... | 10 | 8 | 13 | 11 | 6 | 8 | 8 | 5 | 11 | 13 |
| | *Konkan.* | | | | | | | | | | |
| 15 | Thána ... ... ... ... ... | ... | ... | 13 | 12 | 13 | 11 | 10 | 9 | 12 | ... |
| 16 | Kolába ... ... ... ... ... | ... | ... | 12 | .... | 9 | 10 | 11 | 8 | 14 | ... |
| 17 | Ratnágiri ... ... ... ... | ... | ... | 11 | ... | 11 | 11 | 10 | 7 | ... | ... |
| 18 | Kánara ... ... ... ... ... | 10 | ... | 14 | ... | ... | 11 | 12 | 5 | 7 | ... |
| | *Sind.* | | | | | | | | | | |
| 19 | Karáchi... ... ... ... ... | 8 | 12 | 10 | 10 | ... | 11 | 10 | ... | 9 | 9 |
| 20 | Hyderabad ... ... ... ... | 12 | 13 | 12 | 12 | ... | .... | ... | ... | 10 | 11 |
| 21 | Shikárpur ... ... ... ... | 12 | 13 | 13 | 13 | ... | ... | ... | ... | 13 | 9 |
| 22 | Upper Sind Frontier ... ... | 13 | 13 | 14 | 14 | ... | 10 | ... | .... | 14 | 12 |
| 23 | Thar and Párkar ... ... ... | 11 | 13 | 13 | 11 | ... | ... | ... | ... | ... | 14 |

*Note.*—In the above table the valuations are calculated on the standard by which 16 annas represent an average crop.

The outturn was, on the whole, fairly good. It would have been much better but for the injurious rain of August in Gujarát and of October in the Deccan and Karnátak. Paddy, wheat and gram yielded fairly average harvest all over. Jowári, bájri and cotton did fairly well.

52. Fruit-Trees.—Increase is reported except under jack and date-palm. The increase is large in cocoanut and mango. The attempt to show the number of important fruit-trees is continued. It may not be accurate, but it shows the distribution well. Trees in forest and on village sites are not enumerated.

FRUIT-TREES (EXCLUSIVE OF RATNÁGIRI).

*(000 omitted.)*

| No. | Province. | | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|---|
| 1 | Gujarát ... ... | | 573 | 126 | 4 | 8 | 237 | 560 |
| 2 | Deccan ... ... | | 787 | 62 | 10 | 8 | 19 | 106 |
| 3 | Karnátak ... ... | | 361 | 106 | 19 | 76 | ... | 1,029 |
| 4 | Konkan ... ... | | 499 | 34 | 151 | 1,660 | 91 | 13 |
| | Total for the Presidency Proper. | 1892-93 | 2,220 | 328 | 184 | 1,752 | 347 | 1,708 |
| | | 1891-92 | 2,130 | 318 | 193 | 1,519 | 334 | 1,717 |
| | | | +90 | +10 | −9 | +233 | +13 | −9 |
| 5 | Sind ... ... ... | | 185 | ... | ... | 1 | ... | 154 |
| | Grand Total, | 1892-93 | 2,405 | 328 | 184 | 1,753 | 347 | 1,862 |
| | „ | 1891-92 | 2,328 | 318 | 193 | 1,520 | 334 | 1,871 |

The enumeration includes a special estimate of trees of local value in particular districts, thus :—

| Trees and Districts. | Number. | Trees and Districts. | Number. |
|---|---|---|---|
| *1.—Moha (Bassia latifolia).* | | *5.—Hirdá (Terminalia chebula).* | |
| Kaira ... ... ... ... | 136,337 | | |
| Panch Mahals ... ... ... | 90,429 | | |
| Khándesh ... ... ... | 61,880 | Ahmadnagar ... ... ... | 12,261 |
| Násik ... ... ... ... | 3,401 | | |
| Broach ... ... ... | 1,765 | *6.—Fig (Ficus carica).* | |
| *2.—Betel-nut (Areca-catechu).* | | | |
| | | Poona ... ... ... ... | 37,923 |
| Kánara ... ... ... | 7,823,627 | Násik ... ... ... ... | 1,476 |
| Thána ... ... ... ... | 5,384 | Ahmadnagar ... ... ... | 1,762 |
| Kolába ... ... ... ... | 8,279 | Shikárpur ... ... ... | 950 |
| | | Belgaum ... ... ... | 180 |
| *3.—Rayan (Mimusops Indica).* | | Hyderabad ... ... ... | 918 |
| Kaira ... ... ... ... | 73,870 | *7.—Vine (Vitis vinifera).* | |
| Panch Mahals ... ... ... | 3,976 | | |
| Broach ... ... ... ... | 2,464 | | |
| *4.—Keshew-nut (Anacardium occidentale).* | | Násik ... ... ... ... | 39,620 |
| | | Poona ... ... ... ... | 35,542 |
| | | Shikárpur ... ... ... | 25,216 |
| Kánara ... ... ... | 102,352 | Ahmadnagar ... ... ... | 14,063 |
| Thána ... ... ... ... | 5,228 | Khándesh ... ... ... | 1,685 |
| Belgaum ... ... ... | 1,422 | Karáchi ... ... ... | 706 |

## Return No. IV.—Irrigation.

53. The net irrigated area in the year under report amounts to 3·18 per cent. of the net area cropped in the Presidency Proper, and 86·71 per cent. in Sind, as against 3·23 and 87·31, respectively, last year.

The variations under the principal sub-heads are shown below :—

*Irrigated Area.*

| No. | Detail. | Presidency Proper exclusive of Ratnágiri. Acres (000 omitted). 1891-92. | 1892-93. | Increase per cent. | Decrease per cent. |
|---|---|---|---|---|---|
| | *A.—Area Irrigated.* | | | | |
| 1 | Irrigated from canals ... ... | 131 | 123 | ... | 6·1 |
| 2 | Do. from tanks, wells, &c. ... | 659 | 673 | 2·1 | ... |
| 3 | Total Area Irrigated ... | 790 | 796 | 0·7 | ... |
| | *B.—Crops Irrigated.* | | | | |
| 4 | Rice ... ... ... ... | 152 | 146 | ... | 3·9 |
| 5 | Wheat ... ... ... ... | 153 | 197 | 28·7 | ... |
| 6 | Sugarcane ... ... ... | 74 | 67 | ... | 9·4 |
| 7 | Other Crops ... ... ... | 496 | 498 | 0·4 | ... |
| 8 | Total Crops Irrigated ... | 875 | 908 | 3·7 | ... |

*Note.*—The difference between columns 3 and 8 is due to the inclusion in column 8, of the area cropped under irrigation more than once.

The chief variations in the areas irrigated from various sources are noted in the margin. Canal irrigation shows a considerable decrease in tracts of the South Deccan, where the rainfall was very scant last year, and the demand for water unusually large. In tracts where owing to more certain rain the irrigated area is not so variable, the full supply of the canals made a larger area possible. Kaira is exceptional. Area irrigated from tanks and wells gives a general increase as might be expected, when it is noticed that the increase is chiefly conspicuous where irrigation from tanks and running streams (*páthasthal*) is most practised. Kaira is again exceptional. The probable reason is that dry-crop cultivation under favourable rainfall promised sufficiently good results. In Ahmadnagar the derease is not so easily explained.

| District. | Acres (00 omitted). | | |
|---|---|---|---|
| | Canals. | Tanks and wells. | Net variation. |
| Ahmadabad ... ... | +7 | +9 | +16 |
| Kaira ... ... ... | −20 | −40 | −60 |
| Panch Maháls ... ... | ... | +5 | +5 |
| Surat ... ... ... | ... | −3 | −3 |
| Khándesh ... ... | +14 | +11 | +25 |
| Násik ... ... ... | +80 | +30 | +110 |
| Ahmadnagar ... ... | +92 | −89 | +3 |
| Poona ... ... ... | −180 | +68 | −112 |
| Sholápur... ... ... | −35 | +32 | −3 |
| Sátára ... ... ... | −14 | +54 | +49 |
| Belgaum ... ... ... | −18 | −4 | −22 |
| Bijápur ... ... ... | −3 | +21 | +18 |
| Dhárwár ... ... ... | −13 | +70 | +57 |
| Thána ... ... ... | ... | +1 | +1 |
| Kánara..... ... ... | +3 | −23 | −20 |

Among irrigated crops wheat shows a general increase of 44,000 acres, chiefly in Poona (+11,000), Násik (+10,000) and Sátára (+7,000). Sugarcane and rice show a decrease of 7,000 and 6,000 acres, respectively.

**Return No. V.—Agricultural Stock.**

54. Cattle exhibit a total increase of 296,000 or 3·8 per cent. The increase occurs under all heads, except that sheep give a small decrease of 31,000 or 1·5 per cent. The result of the enumeration under principal heads is shown in the following table :—

*Agricultural Stock.*

| Detail. | Presidency Proper exclusive of Ratna'giri. | | | |
|---|---|---|---|---|
| | (000 omitted). | | Increase per cent. | Decrease per cent. |
| | 1891-92. | 1892-93. | | |
| Plough Cattle ... ... | 3,086 | 3,177 | 2·9 | ..... |
| Breeding Bulls ... ... | 20 | 21 | 5·0 | ..... |
| Cattle for other purposes ... | 132 | 140 | 6·0 | ..... |
| Milch Cattle ... ... | 2,658 | 2,763 | 3·9 | ..... |
| Young Stock ... ... | 1,949 | 2,040 | 4·6 | ..... |
| Total Cattle ... | 7,845 | 8,141 | 3·8 | ..... |
| Horses and Ponies ... ... | 135 | 145 | 7·4 | ..... |
| Sheep ... ... ... | 1,972* | 1,941 | ..... | 1·5 |
| Goats ... ... ... | 1,331* | 1,513 | 13·6 | ..... |
| Ploughs... ... ... | 1,057 | 1,083 | 2·5 | ..... |
| Carts ... ... ... | 487 | 499 | 2·4 | ..... |

*Note.—Changes in the figures of sheep and goats reported last year are due to subsequent corrections.

The district variations are noted below :—

| No. | District. | Plough Oxen. | Cows. | She-buffaloes. | Young Stock. | Total Cattle. | Sheep. | Goats. |
|---|---|---|---|---|---|---|---|---|
| 1 | Ahmadabad ... .. | −1,627 | +2,642 | +998 | +2,276 | +3,677 | −2,258 | +1,149 |
| 2 | Kaira ... ... ... | −2,763 | −1,007 | −633 | −2,115 | −6,211 | −4,284 | −1,702 |
| 3 | Panch Maháls ... ... | +9,427 | +5,901 | +2,502 | +2,948 | +19,707 | +386 | +3,758 |
| 4 | Broach ... ... ... | +1,212 | +247 | +888 | +1,714 | +4,045 | −1,277 | +2,335 |
| 5 | Surat ... ... ... | −597 | −544 | +535 | −1,065 | −697 | −2,586 | −2,064 |
| 6 | Khándesh ... ... ... | +4,758 | +6,201 | +4,725 | +31,271 | +47,241 | +4,392 | +35,565 |
| 7 | Násik ... ... ... | +10,425 | +9,883 | +1,937 | +17,741 | +44,921 | +15,530 | +17,778 |
| 8 | Ahmadnagar ... ... | +10,936 | +6,946 | +1,425 | +22,506 | +44,060 | +18,824 | +31,615 |
| 9 | Poona ... ... ... | +12,678 | +12,254 | +565 | +8,291 | +35,072 | +908 | +35,293 |
| 10 | Sholápur ... .. ... | +9,942 | +4,994 | +520 | +2,819 | +16,986 | −14,081 | +21,305 |
| 11 | Sátára ... ... ... | +4,984 | +7,915 | +2,132 | +10,896 | +25,066 | −23,184 | +16,462 |
| 12 | Belgaum ... ... ... | +8,645 | +4,541 | +5,666 | −9,034 | +9,415 | −14,640 | +3,461 |
| 13 | Bijápur ... ... ... | +12,345 | +10,569 | +4,576 | −5,508 | +24,185 | +6,210 | +13,841 |
| 14 | Dhárwár ... ... ... | +11,727 | −1,215 | +2,354 | −14,204 | −4,032 | −14,476 | −378 |
| 15 | Thána ... ... ... | +5,415 | +6,621 | +959 | +8,212 | +20,369 | +442 | +2,460 |
| 16 | Kolába ... ... ... | +1,115 | +4,583 | +1,219 | +6,535 | +16,244 | −304 | +1,676 |
| 17 | Kánara ... ... ... | −2,489 | −4,176 | −1,895 | +7,589 | −4,305 | −465 | −678 |

*Cattle.*—All districts of the Presidency Proper, except Kaira, Surat, Dhárwár and Kánara, show a general increase. The increase is especially large in the Deccan and Karnátak, where owing to scarcity of fodder there was a considerable shrinkage in the previous year. The general increase indicates a prosperous year. In Gujarát the increase is marked in the Panch Maháls and is attributed to new births and to influx from outside induced by plentiful supply of fodder. In Poona the increase is partly attributed to inclusion of cattle within municipal and cantonment limits. In Thána, advances made to cultivators for purchasing cattle are said to have helped the increase. Decrease in Kaira is credited to sale of spare cattle, and in Dhárwár to sale and deaths caused by effects of last year's scarcity of fodder. Decrease in Kánara is caused by return to their home of cattle taken to Kánara last year in search of food.

*Sheep and Goats.*—Sheep show a small decrease, while goats a larger increase. Sheep appear to have decreased in south Deccan and Dhárwár. Goats have increased in 13 districts. The increase is very large in the Deccan and in Bijápur. Return of flocks at the end of scarcity is said to be one of the causes. It must, however, be noticed that the enumeration of herds of sheep and goats is specially defective owing to the roving habits of herdsmen.

*Horses and Ponies* also exhibit an increase, chiefly in the Deccan, Ahmadnagar (+2,400), Khándesh (+1,300) and Poona (+1,700).

### C.—CROP EXPERIMENTS.

55. As noted in last year's report, the work of crop experiments was carried out on an extended scale under the orders of Government (Government Resolution No. 8139, dated 13th October 1892). In all, 127 experiments on crops noted in the margin were conducted during 1892-93 as against 83 in the year before, showing an increase of 50 per cent. Of these 54 were reported from the Northern, 39 from the Central and 34 from the Southern Divisions. A separate report on these experiments will shortly be submitted to Government as usual.

Rice 28; wheat 29; pulses 19; kodra and other hill millets 12; mixed crops 10; jowári 9; oil-seeds 7; potatoes and cotton 3 each; bájri and onions 2 each; sugarcane 2 and navani 1.

### D.—FORECAST OF SEASON, 1893-94.

56. There was a remarkable and very unusual rainfall in May, which, however, favoured early sowings of rice in the Konkan and of cotton in Khándesh. The June rain was unusually heavy in Gujarát and north Konkan, but deficient in parts of the Karnátak. This irregularity continued through July, for the July rain was generally deficient for young crops in the Deccan and Karnátak and for rice transplantation in the Konkan, but in Gujarát the break proved beneficial for completing kharif sowings delayed by incessant heavy rain. Serious injury from rats and caterpillars was reported at this time in parts of the Karnátak and Deccan. August rain was generally seasonable and sufficient, and injury from rats began to lessen. Rainfall in September was also favourable for standing

kharif crops and for rabi sowing, except in parts of the Karnátak (especially Dhárwár) and the Deccan, where it was deficient. Good rain has fallen in October throughout the south Deccan and Karnátak, where it was most needed, being favourable for standing kharif crops and promising a good rabi harvest. Prospects of the autumn crops are decidedly good all over the Presidency. The anxiety naturally arising from initial irregularity has been removed.

## VIII.—TRADE AND TRADE STATISTICS.

57. A detailed report on rail-borne traffic on the figures compiled by the Examiner of Guaranteed Railway Accounts for the year ending 31st March 1893 has already been submitted to Government with a separate report for Sind with review. The trade registered is shown below :—

| Year. | Presidency Proper. | | | | Sind. | | | |
|---|---|---|---|---|---|---|---|---|
| | External Trade. | | Local Trade. | Total Trade. | External Trade. | | Local Trade. | Total Trade. |
| | Imports. | Exports. | | | Imports. | Exports. | | |
| | Maunds, 1 maund =82 lbs. (00000 omitted). | | | | | | | |
| Average ... ... | 302 | 98 | 294 | 694 | 80 | 21 | 70 | 171 |
| 1891-92 ... ... | 383 | 118 | 333 | 834 | 135 | 33 | 86 | 254 |
| 1892-93 ... ... | 342 | 112 | 300 | 754 | 57 | 27 | 51 | 135 |
| Increase + or decrease — over average ... ... | +40 | +14 | +6 | +60 | —23 | +6 | —19 | —36 |
| Increase + or decrease — over last year ... ... | —41 | —6 | —33 | —80 | —78 | —6 | —35 | —119 |

The total trade of the Presidency Proper during 1892-93 was 8·64 per cent. above average, but 9·59 per cent. below that of last year; while the total trade of Sind decreased by 21 and 46·85 per cent. as compared with average and with last year respectively.

The road-borne trade was, as usual, registered at six selected nákas. Road traffic was also registered by the Public Works Department in parts of Gujarát.

## IX.—ARCHÆOLOGY.

58. No reports on the subject have been received from the District Officers under Government Resolution No. 1672, dated 13th April 1889, General Department.

## X.—MINERAL STATISTICS.

59. The annual return of minerals was submitted to the Government of India in June last in the much abridged form now prescribed.

The grant of a prospecting license in Bijápur noticed in last year's report has been deferred pending the settlement of terms in consultation with the Remembrancer of Legal Affairs.

## XI.—COLLECTIONS FOR THE IMPERIAL INSTITUTE.

60. The collection of silk and cotton products and manufactures referred to in paragraph 77 of the last year's report was made and sent to the Imperial Institute.

## CONCLUSION.

61. Mr. Mollison, the Superintendent of Farms, thrice inspected the Bhadgaon Farm and conducted its sale. The special potato experiments at Khed were conducted under his direct supervision, and visits to Khed were frequent. He attended the Ahmadnagar Horse Show, accompanied Mr. Cappel to Hyderabad to report on the capabilities of the local farm, and purchased at Karáchi, Sind, milch cattle for the Poona Farm and the Ceylon Government. The working of the Poona Farm and the Ganesh Khind gardens was conducted under his supervision. He also conducted the duties of Joint Secretary to the Empress Gardens

now under the Agri-Horticultural Society of Western India. He reviewed the reports of the Experimental Farms, and Horse, Cattle and Agricultural Shows, and studied and prepared the review of crop experiments for my annual report thereon. He personally made three crop experiments. He gave lectures for the prescribed courses at the College of Science. Mr. Mollison's local experience has been greatly enlarged, and his services are not only highly valuable, but he has proved how short a time is required for an agricultural expert to master new systems of agriculture. His special attention is being directed to the improvement of dairy breeds of cattle—a subject which his experience enables him to take up thus early in his Indian service.

Mr. Mehta's services are temporarily lost to the Agricultural Department by his transfer, on the sale of the Bhadgaon Farm, to the Survey Department, especially with a view to his qualifying for the post of Divisional Inspector, Land Records and Agriculture, in the Northern Division.

The Assistant to the Agricultural Chemist to the Government of India lectured at the College of Science on agricultural chemistry from June to September.

My Personal Assistant Ráv Bahádur Ichhárám Bhagvándás has maintained his high character for zeal and ability. Though the amalgamation of the Survey and Agricultural Departments has made my charge very heavy, the work has not fallen into serious arrears—thanks to the devotion to duty shown by my two Personal Assistants, Mr. Ichhárám in the Land Records and Agricultural Branch and Mr. H. V. Sáthe in the Survey Branch, which has secured like energy from the Superintendents and subordinate members of the large office.

I have the honour to be,

Sir,

Your most obedient Servant,

E. C. OZANNE,

Survey Commissioner and Director,
Land Records and Agriculture.

# STATISTICS.

## A.—RAINFALL.

## EXPLANATORY REMARKS.

*Rain Periods and their dates.*

| | | |
|---|---|---|
| Early Rains ... ... ... ... ... ... | | 1st January—10th April. |
| Ante-Monsoon— | | |
| 11th April to 4th June ... | Ashvini ... ... | 11th April—24th April. |
| | Bharani ... ... | 25th April—8th May. |
| | Krittika ... ... | 9th May—22nd May. |
| | Rohini ... ... | 23rd May—4th June. |
| Monsoon-Kharif— | | |
| 5th June to 14th August. | Mrig... ... ... | 5th June—19th June. |
| | Ardra ... ... | 20th June—3rd July. |
| | Punarvasu ... ... | 4th July—17th July. |
| | Pushya ... ... | 18th July—31st July. |
| | Áshlesha ... ... | 1st August—14th August. |
| Monsoon-Rabi— | | |
| 15th August to 21st Oct . | Magha ... ... | 15th August—27th August. |
| | Purva ... ... | 28th August—10th September. |
| | Uttara ... ... | 11th September—24th September. |
| | Hast... ... ... | 25th September—7th October. |
| | Chitra ... ... | 8th October—21st October. |
| Late Rains— | | |
| 22nd Oct. to 30th Nov ... | Sváti ... ... | 22nd October—3rd November. |
| | Vishákha ... ... | 4th November—17th November. |
| | Anurádha ... ... | 18th November—30th November. |
| December. | | |

The average given in the tables is that for eleven years ending 1892, except for very few stations. The rainy days are compared with last year only.

The anna valuation given in the remarks is on the basis of 16 annas representing an average crop.

## Synopsis of Rainfall Summary, 1892-93.

| District. | Kharif. | | Rabi. | | General Remarks as to Rain. |
|---|---|---|---|---|---|
| | Rain. | Harvest. | Rain. | Harvest. | |
| West Khándesh ... | Favourable and plentiful. | Good ... ... | Good but unseasonable at harvest time. | Fair ... ... | Up to average. |
| East Khándesh ... | Seasonable, except in Úttara and Sváti, when injuriously heavy. | Fair ... ... | Do. ... | Do. ... ... | Above average and excessive. |
| Násik ... ... | Do. .. | Good, but poor in east. | Do. ... | Good ... ... | Up to or above average. |
| Ahmednagar ... | Plentiful but unseasonable, for Sváti rain excessive. | Fair ... ... | Fair ... ... | Fair ... ... | Above average. |
| Poona ... ... | Do. ... | Do. ... ... | Do. ... ... | Do. ... ... | Up to or above average. |
| Sholápur ... ... | Do. ... | Do. but poor in west. | Do. ... ... | Do. ... ... | Above average. |
| Sátára ... ... | Do. ... | Fair ... ... | Do. ... ... | Do. ... ... | Do. |
| Belgaum ... ... | Heavy, but unseasonable and excessive in Chitra and Sváti. | Do. ... ... | Excessive for sowing. | Good in north-east; poor elsewhere. | Do. |
| Bijápur ... ... | Do. ... | Do. ... ... | Do. ... | Fair. Injury from blight and rats. | Do. |
| Dhárwár ... ... | Favourable, but excessive in north. | Do. ... ... | Good but injurious at harvest time. | Fair ... ... | Do. except in south. |
| Kánara ... ... | Seasonable and sufficient. Sváti injurious on coast. | Good ... ... | Seasonable ... | Do. ... ... | Above average. |
| Ratnágiri ... ... | Seasonable, but Purva and Sváti excessive and injurious. | Fair ... ... | Do. ... | Do. ... ... | Do. |
| Kolába ... ... | Do. ... | Good ... ... | Do. ... | Do. ... ... | Do. |
| Thána ... ... | Seasonable, though Hast and Chitra scant. | Very good ... | Do. .. | Good ... ... | Do. |
| Surat ... ... | Favourable, but Purva and Sváti injurious. | Rice good; other crops fair. | Do. ... | Good except, vál which suffered from blight. | Do. |
| Broach ... ... | Seasonable; Purva slightly injurious. | Rice and cotton good; other crops fair. | Do. ... | Good, save where damaged by frost. | Up to average. |
| Kaira ... ... | Do. ... | Good except bájri. | Do. ... | Good ... ... | Above average. |
| Panch Maháls ... | Do. ... | Fair ... ... | Do. but injurious at harvest time. | Fairly good ... | Do. |
| Ahmedabad ... | Do. ... | Rice good; other crops fair. | Seasonable ... | Good ... ... | Do. |

## West Khándesh, 1892.

| Rain Periods. | Dhulia. | | Pimpalner. | | Nandurba'r. | | Nava'pur. | | Taloda. | | Sha'ha'da. | | Shirpur. | | Sindkheda. | | Amalner. | | Pa'rola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | 0·09 | ... | ... | ... | ... | ... | 0·05 | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 2·01 | 3 | 1·60 | 4 | 1·43 | 2 | 2·22 | 3 | 1·00 | 2 | 2·40 | 1 | 3·97 | 4 | 1·70 | 1 | 0·96 | 1 | 1·30 | 4 |
| Monsoon-Kharif ... | 9·57 | 22 | 9·21 | 13 | 13·72 | 23 | 22·87 | 35 | 18·33 | 35 | 17·23 | 34 | 8·73 | 22 | 11·25 | 19 | 10·52 | 15 | 14·69 | 27 |
| Monsoon-Rabi ... | 15·38 | 21 | 12·28 | 16 | 11·29 | 20 | 17·69 | 24 | 13·24 | 21 | 12·58 | 19 | 11·34 | 17 | 9·08 | 14 | 14·61 | 20 | 23·91 | 23 |
| Late Rains ... ... | 0·91 | 3 | 1·73 | 3 | 0·25 | 1 | 1·31 | 2 | 2·15 | 1 | 0·63 | 1 | 0·71 | 3 | 0·79 | 2 | 0·52 | 3 | 2·36 | 6 |
| Total .. | 27·37 | 49 | 24·82 | 36 | 26·69 | 46 | 44·18 | 64 | 34·72 | 59 | 32·84 | 55 | 25·30 | 46 | 22·82 | 36 | 26·61 | 39 | 41·96 | 60 |
| Average ... | 27·31 | 34 | 24·37 | 33 | 32·31 | 37 | 35·08 | 52 | 32·30 | 42 | 30·09 | 35 | 28·77 | 41 | 21·52 | 35 | 28·35 | 35 | 32·51 | 40 |

*General characteristics.*—A hilly and rugged tract, except where the wide black-soil plains extend on either side of the Tápti and its tributaries. Rainfall very heavy in the Dángs.

*Remarks.*—Rainfall below average only at Nandurbár. Owing to favourable ante-monsoon showers the fields were ready prepared for kharif sowings, which generally commenced with Mrig rain, but a long break immediately following, a portion of the kharif area remained unsown till good rain in early July had come. August opened (A'shlesha) with favourable rain for the young crops which was followed (Magha) by a partial break, useful for weeding. Heavy rain fell in September which, though untimely and excessive for bájri and other minor crops, was on the whole beneficial. A very valuable break followed in late September (Hast), and the damaged crops considerably improved. Sváti rain is nearly always bad, and showers in this rain period were again injurious to bájri and cotton ready for harvest, though useful for rabi sowings which were completed by the end of November. Rabi crops were generally good except where slightly damaged by unseasonable rain coming at the time of harvest. The season was on the whole good. Outturn of kharif crops estimated at 8—16 annas and that of rabi at 12 annas.

## East Khándesh 1892.

| Rain Periods. | Cha'lisgaon. | | Pa'chora. | | Bhadgaon. | | Erandol. | | Chopda. | | Jalgaon. | | Ja'mner. | | Bhusa'val. | | Edalabad. | | Sa'vda. | | Ya'val. | | Ra'ver. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·05 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | 0·30 | 2 | 0·45 | 1 | 0·27 | 2 | 0·65 | 2 | 1·81 | 4 | 1·13 | 4 | 0·15 | 1 | 0·55 | 2 | ... | ... | 0·33 | 1 | 0·16 | 1 | 2·53 | 6 |
| Monsoon-Kharif ... | 20·47 | 24 | 15·58 | 27 | 12·85 | 28 | 16·71 | 29 | 14·09 | 23 | 13·74 | 25 | 20·68 | 27 | 16·63 | 25 | 15·96 | 22 | 15·33 | 20 | 12·55 | 20 | 11·70 | 19 |
| Monsoon-Rabi .. | 24·65 | 27 | 32·10 | 27 | 26·37 | 29 | 25·20 | 23 | 17·34 | 20 | 20·14 | 23 | 24·46 | 25 | 22·46 | 23 | 17·16 | 20 | 22·03 | 21 | 22·20 | 23 | 18·35 | 25 |
| Late Rains ... | 1·20 | 6 | 1·91 | 4 | 3·26 | 7 | 1·63 | 5 | 0·75 | 2 | 2·39 | 5 | 3·92 | 3 | 4·19 | 6 | 1·39 | 3 | 3·37 | 6 | 0·75 | 1 | 2·00 | 5 |
| Total ... | 46·62 | 59 | 50·04 | 59 | 42·75 | 66 | 44·19 | 59 | 33·99 | 49 | 37·45 | 57 | 49·21 | 56 | 43·83 | 56 | 34·51 | 45 | 41·06 | 48 | 35·66 | 45 | 35·08 | 55 |
| Average ... | 36·91 | 41 | 34·33 | 34 | 30·69 | 35 | 35·17 | 50 | 32·42 | 44 | 36·20 | 43 | 37·23 | 42 | 36·32 | 39 | 30·14 | 40 | 32·33 | 39 | 29·90 | 38 | 32·21 | 40 |

*General characteristics.*—In the north, high hills of the Sátpudas. The southern and western portions are also hilly, but the hills less high and continuous. Drainage by the Tápti, the Girna and the Purna. Rainfall larger than in the West Khándesh, but less certain.

*Remarks.*—Rainfall generally above average. Ante-monsoon showers, though less heavy than in west, were on the whole favourable for preparing land. Kharif sowings commenced after general rain of Mrig and continued favourably under occasional fair showers in late June. Early July rain was favourable except in south-western tálukas where sowings retarded till end of that month. August rain falling at short intervals was very beneficial to standing crops. Uttara rain, however, was heavier than in the western division and was very injurious to crops especially in the Girna valley. The break at end of September improved prospects considerably. With the heavy rain of Uttara there was little need of more rain, but it came in the Sváti rain period and was too abundant as well as unseasonable. It damaged ripe cotton, bájri, &c., and was injurious to rabi seedlings. The rabi crops were further damaged by unseasonable rain at the time of harvest. Season was on the whole fair. Kharif outturn estimated at 6—12 annas and rabi at 8—16 annas.

## Násik, 1892.

| Rain Periods. | Na'sik. | | Igatpuri. | | Sinnar. | | Nipha'd. | | Yeola. | | Na'ndgaon. | | Ma'legaon. | | Sata'na. | | Kalvan. | | Chando'r. | | Dindori. | | Peint. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·09 | ... | .. | .... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | .. | .. | .. | .. | .. | 0·48 | 1 |
| Ante-monsoon .. | 2·45 | 3 | 2·02 | 3 | 3·70 | 2 | 2·75 | 3 | 1·05 | 2 | 0·43 | 2 | 0·46 | 1 | 0·81 | 1 | 2·69 | 3 | 3·95 | 5 | 3·16 | 3 | 3·37 | 2 |
| Monsoon-Kharif .. | 14·40 | 29 | 85·56 | 59 | 13·34 | 25 | 13·45 | 31 | 10·36 | 22 | 13·13 | 21 | 12·46 | 16 | 5·13 | 16 | 10·39 | 24 | 16·80 | 34 | 14·95 | 20 | 38·92 | 50 |
| Monsoon-Rabi .. | 14·54 | 22 | 47·60 | 45 | 17·45 | 20 | 20·55 | 26 | 22·18 | 21 | 21·47 | 21 | 23·22 | 22 | 14·88 | 23 | 15·62 | 24 | 19·60 | 24 | 16·14 | 25 | 45·50 | 40 |
| Late Rains .. | 3·66 | 6 | 1·55 | 3 | 4·44 | 4 | 0·71 | 1 | 2·32 | 4 | 0·80 | 4 | 0·56 | 1 | 1·97 | 2 | 0·37 | 2 | 0·50 | 1 | 0·40 | 1 | 0·30 | 1 |
| Total .. | 35·14 | 60 | 136·73 | 110 | 38·93 | 51 | 37·46 | 61 | 35·91 | 49 | 35·83 | 48 | 36·70 | 40 | 22·79 | 42 | 25·07 | 53 | 40·85 | 64 | 31·65 | 58 | 88·57 | 94 |
| Average .. | 33·74 | 43 | 141·10 | 84 | 29·05 | 38 | 25·97 | 31 | 24·76 | 33 | 34·11 | 37 | 25·24 | 34 | 25·10 | 30 | 29·67 | 34 | 31·41 | 38 | 33·05 | 42 | 95·71 | 76 |

*General characteristics.*—The district is divisible into the Desh (or open country) and the Dángs (near the Sahyádris with heavy rainfall and primitive cultivation). The west portions of Násik, Dindori and Igatpuri and the whole of Peint belong to the Dángs.

*Remarks.*—In the Desh rain up to or above average, while in the Dángs (Igatpuri and Peint) though not perceptibly below average it was spread over the unusual number of days, *e. g.*, in Igatpuri where there were, with a less total, many more rainy days than usual. This feature is noticeable throughout the district. Ante-monsoon showers in Rohini were favourable for preparing land and for sowing catch (tushár) crops in the Desh, and rice, nágli, &c., in Dángi tálukas. Kharif sowings were late, commencing after fair showers at end of June (Ardrá), but were nearly completed at end of July except in east, where owing to scanty rain in middle of July sowings retarded and sown crops suffering. Rainfall in August was generally favourable for standing crops and for completing kharif sowings in east. September (Purva and Uttara) rain, though slightly excessive for cotton, bájri, til, &c., in the Desh, was on the whole seasonable. The damaged crops were improved under the favourable break in October. Sváti showers in latter part of October, though slightly injurious to harvested and ripe bájri, were favourable for rabi sowing. Rabi crops were generally good, but slightly damaged by rats in Málegaon. Season was on the whole good. Outturn of tushár crops was generally 6—10 annas, but in Chándor 20 annas. Kharif outturn estimated at 20 annas in Násik and 4—8 annas in Nándgaon; elsewhere 10—16 annas. Rabi outturn was 12—20 annas, except Yeola and Satána, where 6 to 8 annas.

## Ahmadnagar, 1892.

| Rain Periods. | 1 Nagar. | | 2 Pa'rner. | | 3 Shrigonda. | | 4 Karjat. | | 5 Ja'mkhed. | | 6 Shevgaon. | | 7 Neva'sa. | | 8 Ra'huri. | | 9 Kopargaon. | | 10 Sangamner. | | 11 Akola. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | ... | ... | 0·11 | 1 | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 3·00 | 6 | 2·36 | 5 | 3·89 | 5 | 1·95 | 5 | 5·58 | 8 | 2·32 | 5 | 1·20 | 5 | 2·29 | 5 | 0·68 | 4 | 1·37 | 4 | 1·18 | 3 |
| Monsoon-Kharif .. | 19·72 | 28 | 17·72 | 26 | 10·74 | 14 | 10·26 | 15 | 15·84 | 23 | 15·19 | 19 | 9·33 | 21 | 14·59 | 20 | 6·84 | 22 | 10·09 | 20 | 15·90 | 25 |
| Monsoon-Rabi .. | 14·11 | 23 | 16·87 | 25 | 12·66 | 18 | 11·33 | 16 | 13·04 | 26 | 15·17 | 23 | 10·48 | 16 | 14·43 | 18 | 15·61 | 19 | 16·31 | 19 | 12·81 | 20 |
| Late Rains .. | 5·33 | 6 | 3·81 | 6 | 2·57 | 3 | 5·08 | 4 | 5·08 | 7 | 9·44 | 7 | 7·78 | 8 | 4·52 | 6 | 1·72 | 4 | 3·34 | 4 | 3·68 | 5 |
| Total .. | 42·16 | 63 | 40·87 | 63 | 29·86 | 40 | 28·62 | 40 | 39·54 | 64 | 42·12 | 54 | 28·79 | 50 | 35·83 | 49 | 24·85 | 49 | 31·11 | 47 | 33·57 | 53 |
| Average .. | 26·87 | 28 | 26·71 | 31 | 22·35 | 20 | 24·85 | 31 | 31·75 | 36 | 28·50 | 35 | 26·21 | 27 | 26·02 | 27 | 20·11 | 30 | 23·26 | 25 | 24·96 | 34 |

*General characteristics.*—(*1*) *Desh*—Godávari valley (tálukas 6 to 9): rich alluvial plains growing much wheat. Rainfall very uncertain. Bhima and Ghor valley (tálukas 3 and 4) alluvial, but less fertile. Rainfall more capricious. Good year exceptional. Tálukas 1, 2, 5 and 10 lie between these valleys. Alternation of bare hill and treeless plain with occasional fertile well-wooded tracts. Rain more regular. (*2*) *Dángs*—Half Akola has very heavy rain, half abuts on the Desh. The record shows the fall of the plain portion.

*Remarks.*—Rainfall throughout above average and number of rainy days very large. Monsoon commenced early in June with good showers, sufficient for early catch crops (tushár) and kharif sowings, except in north-west where too much fell in the first week of July. Pushya rain at end of July was rather scant, but not so as to cause injury to young crops. Rain in August, falling at short intervals, was on the whole very beneficial to standing crops. Uttara rain in middle of September was untimely for bájri, causing sprouting in the ear and delaying sowing of rabi jowári. Partial break in Hast and Chitra was favourable for rabi sowing and for standing kharif crops. Sváti rain, however, at end of October was unusually heavy, damaging cotton, reaped and ripe bájri and rabi seedlings. Sowing of wheat, gram, &c., was completed in November and rabi crops generally throve well except where slightly damaged by rats and rust. Season was on the whole fair. Outturn of tushár and kharif crops estimated at 8—12 annas, except Nagar and Karjat. Cotton was 10 annas in Nevása: elsewhere 6 annas. Rabi outturn was throughout 8—12 ans.

## Poona, 1892.

| Rain Periods. | Poona. | | Paud. | | Vadgaon. | | Lonávli. | | Khed. | | Ghoda. | | Junnar. | | Siru'r. | | Sásvad. | | Bárámati. | | Dhond. | | Indápur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·03 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·08 | ... | ... | ... | 1·28 | 2 | ... | ... | ... | ... |
| Ante-Monsoon ... | 2·48 | 4 | 2·49 | 3 | 3·54 | 5 | 3·53 | 7 | 3·19 | 4 | 2·10 | 4 | 1·43 | 3 | 1·94 | 5 | 3·21 | 4 | 2·86 | 4 | 5·39 | 3 | 2·00 | 7 |
| Monsoon-Kharif ... | 20·24 | 27 | 35·42 | 44 | 23·43 | 40 | 102·57 | 55 | 14·90 | 25 | 15·93 | 30 | 17·32 | 28 | 11·59 | 24 | 19·81 | 33 | 16·58 | 25 | 12·00 | 15 | 8·10 | 19 |
| Monsoon-Rabi ... | 11·70 | 20 | 21·99 | 32 | 15·97 | 24 | 71·52 | 51 | 9·49 | 18 | 11·63 | 23 | 14·15 | 22 | 16·94 | 18 | 14·23 | 26 | 11·51 | 22 | 12·63 | 18 | 10·20 | 21 |
| Late Rains... ... | 10·74 | 6 | 6·21 | 5 | 6·15 | 5 | 5·79 | 6 | 3·75 | 6 | 2·69 | 6 | 3·64 | 6 | 4·18 | 6 | 6·23 | 6 | 9·34 | 8 | 3·73 | 7 | 3·88 | 10 |
| Total ... | 45·19 | 57 | 66·11 | 84 | 49·09 | 74 | 183·41 | 119 | 31·33 | 53 | 32·35 | 63 | 36·54 | 59 | 34·73 | 53 | 43·48 | 69 | 41·57 | 61 | 33·75 | 43 | 24·18 | 57 |
| Average ... | 36·60 | 42 | 67·22 | 64 | 57·74 | 51 | 171·50 | 100 | 25·03 | 37 | 32·87 | 34 | 34·49 | 46 | 24·47 | 21 | 26·08 | 33 | 24·57 | 31 | ... | ... | 26·38 | 31 |

*General characteristics.*—The district varies from a heavy certain rainfall to a most scant capricious one. Sure rain is enjoyed by the west portions of Junnar, Khed, Háveli and all of Mával. A moderate but regular rainfall characterizes the central belt, while the Bhimthadi and Indápur tálukas are uncertain and irregular like the adjoining tálukas of Sholápur.

*Remarks.*—Number of rainy days large. Rainfall generally up to or above average. Monsoon set in with good showers early in June, and kharif sowings commenced everywhere. A'rdra rain at end of June was scant in the Mával where heavy rain best. But in July the rain was throughout heavy and favourable for transplantation of rice and nagli in the Mával and for sowing bájri and other kharif crops in the Desh, except Indápur. August rain was throughout seasonable and sufficient for standing crops, being especially heavy and favourable at Indápur, where previous rain was deficient. Rainfall of Purva and Uttara in September, though slightly injurious to bájri in some places, was on the whole beneficial both to standing kharif crops and rabi sowings. The partial break in Hast was useful. Heavy rain of Sváti, however, damaged kharif crops ready for harvest and rabi seedlings all over except Khed and Indápur, where it was less heavy and more favourable. No rain fell after Sváti, and rabi crops were generally good except where damaged by cloudy weather. Season was on the whole good. Outturn of kharif crops was generally estimated at 11—14 annas and that of rabi, wheat and gram at 10—12 annas and kardai at 7 annas.

## Shola'pur, 1892.

| Rain Periods. | Sholápur. | | Bársi. | | Mádha. | | Karma'la. | | Pandharpur. | | Sa'ngola. | | Ma'lsiras. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... | 0·03 | ... | 0·01 | ... | ... | ... | ... | ... | 0·11 | 1 | ... | ... | 0·18 | 1 |
| Ante-Monsoon ... ... ... | 3·91 | 6 | 3·01 | 8 | 2·59 | 7 | 3·09 | 6 | 3·46 | 8 | 4·17 | 8 | 1·90 | 4 |
| Monsoon-Kharif ... ... | 10·41 | 18 | 25·01 | 24 | 21·29 | 19 | 10·34 | 20 | 11·59 | 19 | 9·73 | 20 | 17·85 | 23 |
| Monsoon-Rabi... ... ... | 18·49 | 25 | 20·39 | 25 | 18·04 | 26 | 11·65 | 19 | 14·74 | 22 | 22·50 | 21 | 14·25 | 21 |
| Late Rains ... ... ... | 6·44 | 8 | 7·75 | 9 | 9·68 | 9 | 6·56 | 10 | 9·35 | 10 | 3·04 | 8 | 4·89 | 9 |
| Total ... | 39·28 | 57 | 56·17 | 66 | 51·60 | 61 | 31·64 | 55 | 39·25 | 60 | 39·44 | 57 | 39·07 | 58 |
| Average ... | 32.78 | 25 | 35·67 | 34 | 31·81 | 37 | 27·66 | 32 | 29·01 | 39 | 23·17 | 29 | 23·36 | 29 |

*General characteristics.*—The isolated táluka of Bársi is richest, and has the surest rain; but the rainfall is scanty all over the district, and very capricious.

*Remarks.*—Number of rainy days very large. Rainfall throughout above average. Ante-monsoon showers were favourable for preparing land, and heavy showers of June (Mrig and A'rdra) were sufficient for kharif sowings, but rain was short, when sowings were over, for young kharif crops which began to wither in places at end of July. The break, however, was well relieved by the heavy fall of A'shlesha in second week of August. Again after a week's break heavy rain fell in Magha, being very favourable for standing kharif and for rabi prospects. Uttara rain in September, though exceptionally heavy in Sángola, was on the whole seasonable. A favourable break followed in first half of October, but the excessive Sváti rain at end of October did much damage to standing kharif and young rabi crops. No rain fell after this in November and December, and rabi crops were generally thriving. Rabi yield, however, was slightly reduced by heavy rain at the reaping time. Season was on the whole fair. Outturn of kharif crops was generally estimated at 6—12 annas, except Pandharpur and Málsiras, where it was below 4 annas. Rabi outturn was generally 6—12 annas.

## Sátára, 1892.

| Rain Periods. | Sa'ta'ra. | | Koregaon | | Wa'i. | | Khanda'la | | Me'dha. | | Malcolm-peth. | | Pa'tan. | | Kara'd. | | Peth. | | Shira'la. | | Dahiva'di. | | Vaduj. | | Vita. | | Ta'sga'on. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains... ... | 0·11 | 1 | 0·36 | 1 | 0·10 | ... | ... | ... | 0·10 | 1 | 0·22 | 1 | ... | ... | 0·80 | 2 | 0·94 | 3 | 3·12 | 2 | 0·43 | 1 | 0·22 | 1 | 0·71 | 2 | 0·40 | 3 |
| Ante-Monsoon ... | 4·94 | 7 | 5·13 | 9 | 3·22 | 8 | 3·67 | 5 | 2·74 | 9 | 4·27 | 8 | 2·70 | 8 | 4·39 | 10 | 3·06 | 7 | 5·26 | 8 | 2·63 | 5 | 6·48 | 8 | 4·74 | 9 | 3·68 | 10 |
| Monsoon Kharif ... | 20·37 | 38 | 18·10 | 31 | 20·30 | 30 | 8·23 | 22 | 49·32 | 45 | 156·72 | 62 | 44·11 | 46 | 12·48 | 29 | 11·62 | 25 | 19·03 | 29 | 7·13 | 17 | 6·69 | 20 | 8·20 | 24 | 9·25 | 20 |
| Monsoon-Rabi ... | 14·28 | 25 | 13·86 | 24 | 17·55 | 22 | 12·90 | 22 | 24·07 | 26 | 103·82 | 48 | 23·23 | 30 | 12·07 | 26 | 14·06 | 23 | 17·12 | 23 | 14·33 | 24 | 15·32 | 25 | 13·60 | 21 | 16·29 | 25 |
| Late Rains ... ... | 3·77 | 9 | 7·18 | 9 | 7·00 | 8 | 6·89 | 6 | 3·98 | 6 | 5·68 | 10 | 5·10 | 9 | 5·20 | 9 | 5·94 | 7 | 7·31 | 7 | 4·80 | 10 | 6·31 | 11 | 7·98 | 11 | 7·24 | 6 |
| Total ... | 43·47 | 80 | 44·63 | 74 | 48·17 | 68 | 31·69 | 55 | 80·21 | 87 | 270·71 | 129 | 75·14 | 93 | 34·94 | 76 | 35·62 | 65 | 51·84 | 69 | 29·32 | 57 | 35·02 | 65 | 35·23 | 67 | 36·86 | 64 |
| Average ... | 45·30 | 48 | 30·02 | 45 | 34·58 | 38 | 23·40 | 21 | 76·21 | 60 | 292·59 | 110 | 75·81 | 67 | 36·43 | 56 | 30·01 | 48 | 42·30 | 45 | 22·98 | 30 | 24·56 | 35 | 26·13 | 41 | 29·52 | 41 |

*General characteristics.*—Western Belt—Parts of Jávli, Pátan, Wái, Sátára and Válva, hilly. Regular and heavy rainfall. Central Belt—East portions of above and all Koregaon and Karád. Rich, well-watered valleys. Eastern Belt—The rest chiefly a waving plain and of poor land. Uncertain rainfall. But south portion of Tásgaon rich, well-wooded plains.

*Remarks.*—Rainy days very numerous. Rainfall above average. Ante-monsoon showers fairly heavy and favourable for preparing land and for kharíf sowings in west. Mrig and Ardra rain with occasional short breaks was very favourable for kharíf sowings throughout the district. July rain was seasonable and sufficient for transplantation of rice and nágli in west and for completing kharíf sowings elsewhere. The partial break in Áshlesha and Magha was good for weeding, and the general heavy rain in Purva was very beneficial to standing crops. Rainfall of Uttara and Hast was heavier in eastern rabi tracts, and, though slightly harmful to early crops ready for harvest, was on the whole useful for standing kharíf and for rabi sowings. So far season all that could have been desired, but heavy rain of Chitra and Sváti was injurious to kharíf crops ready for harvest as well as to rabi seedlings. Rabi crops, however, were thriving by the ample moisture produced, till the harvest time when they were slightly damaged by untimely rain. Season was on the whole fairly good: kharíf outturn was estimated at 10 annas and rabi at 12-14 annas. Sugarcane and groundnut, for which the heavy October rain was favourable, yielded a bumper crop.

## Belgaum, 1892.

| Rain Periods. | Belgaum. | | Chandgad | | Kha'na'pur. | | Sampgaon. | | Saundatti | | Murgod. | | Goka'k. | | Chikodi. | | Hukeri. | | Athni. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·49 | 3 | 0·34 | 1 | 0·37 | 2 | 0·92 | 3 | 1·11 | 1 | 1·78 | 2 | 1·50 | 1 | 1·55 | 4 | 2·44 | 2 | 0·55 | 3 |
| Ante-Monsoon ... ... | 8·59 | 12 | 7·17 | 11 | 6·34 | 12 | 5·91 | 13 | 4·10 | 8 | 7·34 | 11 | 7·28 | 13 | 6·29 | 8 | 7·26 | 10 | 4·88 | 5 |
| Monsoon-Kharíf... ... | 25·05 | 40 | 64·92 | 51 | 40·70 | 44 | 9·74 | 24 | 7·44 | 16 | 9·09 | 23 | 6·84 | 21 | 10·37 | 27 | 10·22 | 18 | 6·01 | 14 |
| Monsoon-Rabi ... ... | 20·51 | 28 | 32·81 | 36 | 19·45 | 26 | 9·94 | 22 | 13·35 | 22 | 12·93 | 28 | 15·03 | 19 | 15·17 | 24 | 7·92 | 17 | 14·78 | 23 |
| Late Rains ... ... | 9·37 | 11 | 4·73 | 8 | 3·59 | 8 | 3·43 | 5 | 5·96 | 7 | 4·86 | 7 | 4·03 | 8 | 7·07 | 8 | 3·69 | 7 | 4·49 | 6 |
| Total ... | 64·01 | 94 | 109·97 | 107 | 70·45 | 92 | 29·94 | 67 | 31·96 | 54 | 36·00 | 71 | 34·68 | 62 | 40·45 | 71 | 31·53 | 54 | 30·71 | 51 |
| Average ... | 51·49 | 72 | 107·26 | 90 | 67·27 | 84 | 29·15 | 59 | 24·78 | 46 | 26·64 | 44 | 26·72 | 43 | 29·28 | 59 | 26·79 | 47 | 24·07 | 23 |

*General characteristics.*—Near the Sahyádris the rain of the south-west monsoon is very constant and heavy (Belgaum and Khánápur). Further east, Chikodi, Gokák and Sampgaon, it is fitful. The eastern tálukas show a fitful fall, but this is supplemented by a scanty supply from the north-east monsoon (which comes generally in October and later).

*Remarks.*—Rainy days more numerous than usual, and rainfall throughout above average. Ante-monsoon showers were useful for preparing land and valuable for commencing early sowings of rice, nágli, &c., in western tracts. Rainfall in June, though rather deficient in south-west, was on the whole favourable for kharíf sowings. July rain was throughout seasonable and sufficient for transplantation of rice and nágli and for completing kharíf sowings. In August rain fell generally in drizzling showers, which were insufficient, especially in north. Heavy rain of Purva followed by partial break in Uttara was very useful for weeding and cotton sowing. Heavy rain of Hast was very beneficial to all standing crops as well as to rabi cultivation. So far all went well. But the excessive fall of Chitra and Sváti in latter part of October proved very injurious to almost all crops. Very little rain fell in November, and rabi crops throve well owing to plenty of moisture produced by heavy October rain. Season was on the whole fairly good. Kharíf outturn was 8—14 annas. Rabi outturn was 10—16 annas in north-east and 6—8 annas elsewhere.

## Bijápur, 1892.

| Rain Periods. | Bija'pur. | | Indi. | | Sindgi. | | Ba'geva'di. | | Muddebiha'l. | | Ba'galkot. | | Bilgi. | | Ba'da'mi. | | Hungund. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... ... ... | 0·26 | 1 | 0·14 | 1 | 0·05 | ... | 0·35 | 1 | 0·31 | 1 | 0·33 | 1 | 0·08 | ... | 0·50 | 2 | 0·09 | ... |
| Ante-Monsoon ... ... ... | 4·29 | 9 | 1·96 | 6 | 2·61 | 5 | 0·31 | 4 | 3·22 | 5 | 3·83 | 5 | 3·25 | 5 | 3·68 | 6 | 1·36 | 4 |
| Monsoon-Kharif ... ... ... | 11·06 | 20 | 16·23 | 18 | 15·44 | 26 | 8·41 | 16 | 8·45 | 17 | 9·89 | 20 | 12·48 | 21 | 8·40 | 24 | 8·03 | 18 |
| Monsoon-Rabi... ... ... ... | 12·37 | 24 | 21·88 | 24 | 25·75 | 25 | 18·25 | 27 | 21·16 | 32 | 20·73 | 24 | 20·75 | 21 | 22·17 | 26 | 17·95 | 31 |
| Late Rains ... ... ... ... | 7·39 | 9 | 7·44 | 9 | 6·20 | 10 | 8·67 | 9 | 11·17 | 8 | 6·41 | 5 | 6·19 | 7 | 5·65 | 4 | 6·06 | 5 |
| Total ... | 35·37 | 63 | 47·65 | 58 | 50·05 | 66 | 36·99 | 57 | 44·31 | 63 | 41·19 | 55 | 42·75 | 54 | 40·40 | 62 | 33·49 | 58 |
| Average ... | 26·68 | 31 | 28·10 | 28 | 31·28 | 39 | 26·73 | 35 | 27·62 | 33 | 26·03 | 29 | 23·71 | 32 | 28·56 | 42 | 23·29 | 40 |

*General characteristics.*—This district receives its rain from both the south-west and the north-east monsoon. Hungund enjoys an even and generally sure rainfall. Bágalkot and Bádámi fare well as a rule. The rich plains of the Krishna and Don valleys are uncertain. The north tálukas of Bijápur, Indi and Sindgi have capricious and light rainfall.

*Remarks.*—Number of rainy days very large. Rainfall throughout above average. Fair preparatory showers in April and May. Mrig rain was generally light, but heavy rain followed in Árdra and kharíf sowings commenced everywhere. July rain was light, but on the whole favourable for completing kharif sowings. Rainfall in August, though slightly excessive in north, was seasonable and with the partial break in first week of September proved beneficial to standing crops and for preparing rabi lands. Heavy rain in Uttara and Hast was slightly injurious to jowári, bájri, &c. A short break followed in first half of October, but in the latter part of the month very heavy rain fell in Sváti, being injurious alike to kharif crops and rabi seedlings. Ripe jowári and bájri were laid, and grain in the ear sprouted in some places; further sowing of rabi wrs retarded, and rabi seedling suffered from excessive moisture. A clear break came from 5th November, favourable for kharif harvest and completing rabi sowings. Cotton and gram slightly suffered from blight and rats in some places. Rabi outturn was further reduced by heavy rain at the reaping time. Season was on the whole fair. Outturn of both kharif and rabi crops was estimated at 6—10 annas.

## Dhárwár, 1892.

| Rain Periods. | Dha'rwa'r. | | Mugud. | | Hubli. | | Kalghatgi. | | Banka'pur. | | Hangal. | | Kod. | | Ra'nebennur. | | Karajgi. | | Gadag. | | Mundargi. | | Naval gund. | | Nargund. | | Ron. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... | 0·76 | 2 | 1·12 | 1 | 0·15 | ... | 0·12 | 1 | 0·63 | 1 | 1·40 | 2 | 0·16 | 1 | 1·21 | 2 | 0·19 | 1 | 0·40 | 1 | 1·10 | 2 | 0·41 | 3 | 0·50 | 1 | 0·06 | ... |
| Ante-Monsoon ... | 5·67 | 10 | 4·56 | 10 | 3·65 | 8 | 7·11 | 10 | 6·35 | 12 | 5·29 | 10 | 3·89 | 8 | 4·57 | 7 | 4·36 | 9 | 4·72 | 7 | 4·45 | 8 | 3·75 | 9 | 2·17 | 3 | 1·93 | 6 |
| Monsoon-Kharif... | 10·84 | 26 | 16·17 | 30 | 10·56 | 23 | 14·36 | 34 | 10·74 | 28 | 18·33 | 38 | 9·60 | 28 | 3·89 | 10 | 10·52 | 29 | 4·95 | 13 | 3·93 | 12 | 10·65 | 17 | 7·41 | 14 | 7·51 | 15 |
| Monsoon-Rabi ... | 15·54 | 22 | 16·85 | 24 | 16·50 | 24 | 19·78 | 32 | 11·07 | 23 | 11·82 | 24 | 9·21 | 17 | 5·71 | 9 | 9·66 | 19 | 17·07 | 26 | 11·15 | 18 | 23·82 | 28 | 18·70 | 21 | 20·04 | 24 |
| Late Rains ... | 4·45 | 8 | 2·90 | 5 | 3·76 | 6 | 4·93 | 7 | 3·77 | 7 | 1·96 | 5 | 0·39 | 1 | 1·69 | 5 | 2·87 | 6 | 2·18 | 6 | 3·18 | 3 | 5·34 | 4 | 4·90 | 3 | 4·19 | 8 |
| Total ... | 37·26 | 68 | 41·60 | 70 | 34·62 | 61 | 46·20 | 84 | 32·56 | 71 | 38·80 | 79 | 23·25 | 55 | 17·07 | 33 | 27·00 | 64 | 29·32 | 53 | 23·81 | 43 | 43·97 | 61 | 33·68 | 42 | 33·73 | 53 |
| Average ... | 33·19 | 61 | 36·73 | 56 | 28·09 | 56 | 36·41 | 58 | 25·42 | 52 | 41·41 | 64 | 29·11 | 55 | 24·63 | 41 | 25·15 | 44 | 25·71 | 39 | 20·11 | 22 | 28·51 | 31 | 26·10 | 35 | 28·10 | 32 |

*General characteristics.*—The district is composed of hilly tracts—the malád growing rice and hill grains (Hángal, Kalghatgi and Kod) and the black-soil plains growing cotton and wheat (Gadag, Ron, Navalgund and Hubli), or cotton but no wheat (Karajgi and Ránebennur). The Dhárwár and Bankápur tálukas are partly malád. The soil of the malád is red and gravelly, but the rainfall is steady and comparatively heavy. It is more sure and seasonable the further to the west. The proverb says: 'Good rain won't give a big crop, nor will bad rain bring famine.' This is in comparison to the fertile black-soil plains, where with good seasonable rains the produce is very large, but where the fall is irregular and uncertain, and where there is always risk of drought.

*Remarks.*—Rainfall above average except in south (Hángal, Kod and Ránebennur). Ante-monsoon showers fairly heavy and useful for preparing land and for sowing early rice and nágli in west. Kharíf sowing commenced throughout with Mrig, but did not continue well owing to scanty rain in Árdra. July rain was generally favourable for completing kharíf sowings and for young crops except in north-eastern rabi talukas. Ránebennur especially suffered from a prolonged break. Heavy rain came all over at end of August and was very favourable for standing crops and for cotton sowing. Uttara and Hast rain was heavy in north, where sowing of cotton, here a rabi crop, was delayed for want of a break. Heavy rain fell again in October, and, though favourable in south, was injurious to ripening kharíf crops in north. Very little rain fell in November, and the break was very valuable for harvesting of kharíf crops and for rabi sowing. It was also beneficial to cotton, which was suffering from excess of moisture. Rabi crops were further damaged by rain at harvest time. Season was on the whole fair. Outturn of both kharíf and rabi crops was estimated at 8—13 annas.

## Ka'nara, 1892.

| Rain Periods. | Kárwár. | | Ankola. | | Kumta. | | Honávar. | | Bhatkal. | | Haliyál. | | Supa. | | Yella'pur. | | Mundgod. | | Sirsi. | | Sidda'pur. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | 0·15 | 1 | 0·70 | 1 | ... | ... | ... | ... | ... | ... | 2·31 | 5 | 0·74 | 2 | 0·64 | 1 | 1·17 | 2 | 0·15 | 1 | 0·02 | ... |
| Ante-Monsoon ... ... | 22·07 | 12 | 19·36 | 11 | 24·21 | 12 | 20·07 | 11 | 27·84 | 15 | 8·29 | 12 | 9·58 | 9 | 8·15 | 11 | 4·36 | 11 | 13·22 | 14 | 12·17 | 13 |
| Monsoon-Kharif ... | 76·08 | 62 | 87·24 | 62 | 93·77 | 63 | 103·90 | 63 | 106·34 | 64 | 23·59 | 39 | 58·40 | 50 | 64·08 | 54 | 22·67 | 39 | 67·62 | 51 | 72·95 | 53 |
| Monsoon-Rabi ... ... | 44·27 | 46 | 52·82 | 48 | 47·01 | 44 | 50·95 | 43 | 54·99 | 48 | 21·29 | 31 | 30·79 | 33 | 30·55 | 34 | 16·68 | 31 | 26·81 | 36 | 33·23 | 38 |
| Late Rains ... ... | 11·99 | 9 | 8·75 | 9 | 13·30 | 8 | 17·77 | 9 | 10·20 | 10 | 4·88 | 7 | 5·47 | 8 | 4·97 | 7 | 4·76 | 7 | 2·28 | 8 | 1·92 | 7 |
| Total ... | 154·56 | 130 | 168·87 | 131 | 178·29 | 127 | 192·69 | 126 | 199·37 | 137 | 60·36 | 94 | 104·98 | 102 | 108·39 | 107 | 49·64 | 90 | 110·08 | 110 | 120·29 | 111 |
| Average ... | 129·20 | 102 | 134·76 | 102 | 151·88 | 105 | 148·02 | 102 | 154·61 | 106 | 49·27 | 75 | 99·52 | 92 | 102·66 | 96 | 43·92 | 69 | 102·45 | 98 | 112·21 | 101 |

*General characteristics.*—A hilly and thickly wooded district, divided into two parts by a broken and irregular range of hills. The low land or coast tract has the heavier rainfall; in the upland the fall rapidly decreases with the distance from the Sahyádri crest.

*Remarks.*—Rainy days large in number. Rainfall throughout above average, but a very heavy fall can, if seasonable, give very good results. Monsoon broke very early (27th May) with heavy rain, sufficient for early rice sowings which were completed by middle of June. Árdra rain at end of June was scant, and transplantation delayed till second week of July. Rainfall in July and August was throughout seasonable and sufficient for transplantation and weeding; crops were generally thriving, though early rice on coast was slightly damaged by heavy rain of Purva. September rain was generally light and beneficial to standing crops. Heavy rain of Sváti at end of October, though harmful to ripe rice especially on coast, was beneficial to late rice and garden crops in upland tálukas. Season was on the whole good, outturn being estimated all round at 16 annas. Cardamoms, however, were damaged by a beetle, and the yield was reduced to half the average.

## Ratna'giri, 1892.

| Rain Periods. | Ratna'giri. | | Vengurla. | | Ma'lvan. | | Devgad. | | 'Ra'ja'pur. | | Sanga-meshwar. | | Chiplu'n. | | Guha'gar. | | Khed. | | Da'poli. | | Mandangad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 9·69 | 5 | 12·38 | 12 | 11·05 | 8 | 12·13 | 7 | 15·48 | 7 | 8·19 | 6 | 4·49 | 6 | 4·57 | 5 | 1·62 | 3 | 3·58 | 3 | 5·03 | 3 |
| Monsoon-Kharif ... | 73·91 | 55 | 77·31 | 52 | 68·73 | 55 | 65·62 | 53 | 99·09 | 59 | 102·74 | 59 | 88·20 | 61 | 58·09 | 52 | 91·97 | 59 | 86·29 | 53 | 138·76 | 64 |
| Monsoon-Rabi ... ... | 47·50 | 40 | 53·02 | 42 | 59·51 | 41 | 38·80 | 37 | 68·34 | 42 | 68·91 | 47 | 69·47 | 48 | 61·84 | 42 | 64·16 | 47 | 71·85 | 53 | 63·70 | 46 |
| Late Rains ... ... | 6·50 | 8 | 12·13 | 8 | 15·37 | 9 | 16·30 | 9 | 8·44 | 5 | 10·64 | 9 | 4·77 | 8 | 6·36 | 5 | 9·00 | 9 | 6·96 | 7 | 3·81 | 4 |
| Total ... | 137·60 | 108 | 154·84 | 114 | 154·66 | 113 | 132·85 | 106 | 191·35 | 113 | 190·48 | 121 | 166·93 | 123 | 130·86 | 104 | 166·75 | 118 | 168·68 | 116 | 211·30 | 117 |
| Average ... | 106·99 | 83 | 118·13 | 87 | 100·57 | 66 | 95·23 | 84 | 149·55 | 98 | 162·52 | 93 | 155·74 | 93 | 107·74 | 79 | 147·48 | 87 | 146·59 | 94 | 165·87 | 103 |

*General characteristics.*—The district is formed by a narrow belt of low land; though hilly, and rugged as a whole, the valleys are more open near the Sahyádris than towards the centre, and these again fall into nearly level plateaus towards the centre. The rainfall is abundant and regular, being considerably heavier inland than on the coast.

*Remarks.*—Rainy days numerous. Rainfall throughout above average. Monsoon set in at end of May and sowings commenced everywhere. Mrig rain, though too heavy in places, was on the whole seasonable for kharif sowings. A'rdra rain at end of June was too light for transplantation, which, however, was seasonably completed in July. Continuous heavy rain in August and September proved slightly injurious to early crops, delaying harvest, and also to rice crops in low lands. Hast and Chitra rain in early October being light allowed reaping of early crops. But Sváti rain at end of October was again heavy and damaged reaped rice lying in fields. Very little rain fell in November, and the break was favourable for reaping of rice and varkas crops and for sowing second crops. Season was on the whole fair. Outturn of rice and nágli, both early and late, was estimated at 10—11 annas, that of vari 8 annas and harik 9 annas.

## Kolába, 1892.

| Rain Periods. | Alibág. | | Panvel. | | Uran. | | Karjat. | | Ma'thera'n. | | Kha'la'pur. | | Pen. | | Roha. | | Ma'ngaon. | | Ma'ha'd. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 1·45 | 3 | 0·97 | 3 | 0·88 | 2 | 0·42 | 1 | 1·66 | 3 | 1·35 | 4 | 1·51 | 3 | 1·44 | 3 | 2·34 | 3 | 2·93 | 4 |
| Monsoon-Kharif ... ... | 57·74 | 52 | 83·42 | 51 | 55·06 | 55 | 65·56 | 52 | 123·83 | 64 | 65·02 | 53 | 60·66 | 59 | 68·10 | 58 | 88·57 | 61 | 87·61 | 58 |
| Monsoon-Rabi ... ... | 54·53 | 36 | 69·04 | 40 | 57·22 | 33 | 46·98 | 46 | 82·66 | 52 | 62·21 | 44 | 67·65 | 44 | 71·90 | 43 | 71·89 | 46 | 54·52 | 48 |
| Late Rains ... ... | 3·70 | 6 | 4·75 | 6 | 3·33 | 5 | 9·21 | 4 | 15·94 | 8 | 7·99 | 5 | 4·21 | 5 | 4·65 | 4 | 5·49 | 4 | 9·58 | 8 |
| Total ... | 117·42 | 97 | 158·18 | 100 | 116·49 | 95 | 122·17 | 103 | 224·09 | 127 | 136·57 | 106 | 134·03 | 111 | 146·09 | 108 | 168·23 | 114 | 154·64 | 118 |
| Average ... | 91·77 | 83 | 121·52 | 73 | 99·85 | 77 | 130·81 | 86 | 224·93 | 97 | 132·12 | 90 | 121·92 | 90 | 127·67 | 93 | 136·16 | 89 | 138·95 | 91 |

*General characteristics.*—A rugged belt of country from 15 to 30 miles broad. Rainfall abundant and regular, being heaviest in parts towards the Sahyádris.

*Remarks.*—Rainy days numerous. Rainfall generally above average. Monsoon commenced early in June and kharif sowings were completed in good time. A'rdra rain was deficient for transplantation and for rice seedlings which began to wither. Heavy rain came in July and was throughout seasonable and sufficient for ploughing and transplantation. Rainfall in August and September, though slightly excessive in places, especially that of Purva (28th August—10th September), was on the whole beneficial to standing crops. Sváti rain, however, at end of October was throughout unseasonable and injurious to crops, delaying reaping, especially in southern tálukas. Break since 2nd November was favourable for reaping kharif and sowing rabi crops. Season was on the whole fairly good. Kharif outturn was estimated at 14 annas and rabi at 12 annas.

## Thána, 1892.

| Rain Periods. | Tha'na. | | Kalya'n. | | Murba'd. | | Shaha'pur. | | Mokha'da. | | Bhiwndi. | | Bassein. | | Va'da. | | Ma'him. | | Daha'nu. | | Umba'rgaon. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | | | In. | | In. | | In. | | In | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | ... | ... | ... | ... | 0·02 | ... | 0·10 | 1 | ... | ... | ... | ... | 0·01 | ... | ... | ... | ... | ... | ... | ... |
| Ante-Monsoon ... ... | 2·31 | 3 | 1·35 | 4 | 1·56 | 3 | 0·75 | 3 | 3·22 | 3 | 1·15 | 3 | 0·66 | 2 | 1·48 | 2 | 2·65 | 2 | 0·59 | 1 | 1·15 | 1 |
| Monsoon-Kharif ... | 75·36 | 58 | 65·89 | 52 | 59·35 | 49 | 66·54 | 54 | 57·65 | 53 | 67·67 | 50 | 51·31 | 49 | 62·66 | 56 | 32·16 | 36 | 40·46 | 43 | 38·60 | 41 |
| Monsoon-Rabi ... ... | 51·78 | 35 | 51·41 | 34 | 45·40 | 38 | 50·09 | 41 | 46·04 | 43 | 57·43 | 37 | 56·92 | 34 | 47·03 | 37 | 40·56 | 32 | 50·78 | 35 | 41·82 | 29 |
| Late Rains ... ... | 2·17 | 4 | 1·50 | 5 | 2·72 | 5 | 1·86 | 5 | 2·16 | 5 | 2·77 | 5 | 0·94 | 2 | 2·26 | 6 | 0·42 | 1 | 0·44 | 3 | 0·70 | 2 |
| Total ... | 131·62 | 100 | 120·15 | 95 | 109·53 | 95 | 119·26 | 103 | 109·17 | 105 | 128·92 | 95 | 109·83 | 87 | 113·44 | 101 | 75·79 | 71 | 92·27 | 82 | 82·27 | 73 |
| Average ... | 102·50 | 84 | 106·98 | 76 | 104·96 | 81 | 110·64 | 84 | 102·26 | 84 | 107·70 | 76 | 82·16 | 68 | 96·50 | 71 | 61·24 | 57 | 75·00 | 56 | 69·15 | 52 |

*General characteristics.*—Inland, the district is well watered and well wooded. Rainfall abundant, being considerably more inland than on the coast and less towards the north than towards the south.

*Remarks.*—Rainy days numerous. Rainfall throughout above average. Monsoon set in with light rain, favourable for kharif sowing, except that of salt rice which needs heavy rain. A'rdra rain was throughout scant, and seedlings began to wither in places. The much needed heavy rain came with Punarvasu in 2nd week of July and continued till middle of September, being throughout seasonable and sufficient for ploughing, transplantation and vigorous growth of all crops. At end of September and in early October the rainfall of Hast and Chitra was insufficient for late rice, which slightly suffered in outturn. Unlike other Konkan districts, Thána did not receive the excessive and injurious rain of Sváti, which being light proved favourable for rabi sowings. Season was on the whole good. Outturn of kharif crops was estimated at 15—17 annas and that of rabi at 12—14 annas.

## Surat, 1891.

| Rain Periods. | Surat. | | Olpád. | | Ránder. | | Mándvi. | | Bárdoli. | | Va'lod. | | Jala'lpor. | | Chikhli. | | Bulsár. | | Pa'rdi. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0·03 | .. | .. | .. | .. | .. | 0·23 | 1 | .. | .. |
| Ante-Monsoon .. .. | 0·40 | 1 | 0·75 | 1 | 0·25 | 1 | 0·10 | 1 | 0·45 | 1 | 0·82 | 1 | 0·53 | 2 | 1·60 | 2 | 0·64 | 1 | 0·75 | 1 |
| Monsoon-Kharif .. .. | 38·53 | 35 | 30·15 | 36 | 30·93 | 32 | 35·77 | 36 | 42·90 | 39 | 41·29 | 42 | 44·39 | 36 | 46·76 | 44 | 44·65 | 38 | 53·63 | 47 |
| Monsoon-Rabi .. .. | 16·22 | 24 | 16·34 | 23 | 18·21 | 27 | 22·21 | 27 | 24·60 | 30 | 31·09 | 29 | 29·89 | 31 | 31·99 | 28 | 41·33 | 29 | 55·93 | 31 |
| Late Rains .. .. | .. | .. | .. | .. | 0·51 | 2 | 0·26 | 1 | 1·81 | 3 | 0·02 | .. | 1·77 | 2 | 0·42 | 1 | 1·15 | 2 | 0·78 | 4 |
| Total .. | 55·15 | 60 | 47·24 | 60 | 49·90 | 62 | 58·34 | 65 | 69·76 | 73 | 73·25 | 72 | 76·58 | 71 | 80·77 | 75 | 88·00 | 71 | 111·09 | 83 |
| Average .. | 46·64 | 40 | 37·54 | 41 | 43·51 | 43 | 58·28 | 51 | 58·68 | 49 | 61·83 | 51 | 62·61 | 50 | 72·37 | 55 | 70·84 | 55 | 80·07 | 65 |

*General characteristics.*—Western portion all along the coast poor sandy soil; central belt with rich soil and moderate rainfall; further to the east Dángs with heavy rainfall but light soil. As a rule, rain lighter on the coast than inland.

*Remarks.*—Rainfall throughout above average. Fair showers of Mrig were useful for preparing land and for commencing kharif sowings of rice, cotton, &c. Ardra rain was generally scant. Heavy rain came in July, and though slightly injurious to cotton seedlings, was favourable for kharif sowings and rice transplantation. Rainfall till end of August was generally favourable and crops were in good condition, but the fall of Purva in early September was unusually heavy, especially in south, and injurious to jowár, bájri and cotton. Showers of Chitra and Sváti in October also proved slightly injurious to cotton and reaped rice lying in fields. They were, however, useful for rabi sowings. Season was on the whole good. Of kharif crops rice was good, (14 annas), other crops middling (8—12 annas). Rabi crops were generally fair except vál, which suffered from blight. Cotton suffered from heavy rainfall, and outturn was reduced to 9 annas.

## Broach, 1891.

| Rain Periods. | Broach. | | Anklesvar. | | Ha'nsot. | | Va'gra. | | A'mod. | | Jambusar. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ante-Monsoon .. | 0·41 | 1 | 0·17 | 1 | 0·25 | 1 | 0·37 | 1 | 0·35 | 1 | 0·65 | 1 |
| Monsoon-Kharif .. | 19·74 | 26 | 19·76 | 25 | 21·71 | 26 | 17·42 | 24 | 21·77 | 22 | 21·00 | 23 |
| Monsoon-Rabi .. | 18·33 | 23 | 17·15 | 20 | 16·24 | 17 | 14·67 | 17 | 19·01 | 16 | 16·33 | 20 |
| Late Rains .. .. | 0·64 | 2 | 1·00 | 1 | .. | .. | .. | .. | .. | .. | 0·02 | .. |
| Total .. | 39·12 | 52 | 38·08 | 47 | 38·20 | 44 | 32·46 | 42 | 41·13 | 39 | 38·00 | 44 |
| Average .. | 39·71 | 38 | 38·57 | 38 | 33·95 | 34 | 29·92 | 42 | 37·88 | 33 | 34·51 | 30 |

*General characteristics.*—Rich alluvial plains growing cotton and wheat. Rainfall moderate but sure, being, as a rule, more plentiful in the Broach Táluka. The rainfall is supplemented by heavy dews from October to December.

*Remarks.*—Rainfall was generally up to or slightly above average. The heavy showers of Mrig were very favourable for kharif sowings of cotton, rice, kodra, &c. No rain fell in Ardra, and sowings delayed till 2nd week of July, when heavy rain of regular monsoon commenced. Kharif sowings were completed in the partial break in Pushya at end of July. August rain, being seasonably relieved by short breaks at intervals, proved very beneficial to standing crops. The heavy rain of Purva and Uttara in September was slightly excessive for cotton, jowári, bájri, &c., that were ready for harvest. Except light showers of Sváti, mostly in south, very little rain fell in October, and reaping of kharif and sowing of rabi crops was carried on favourably. Rabi, gram and wheat, suffered a little owing to frost in Vágra. On the whole, season was good. Cotton and wheat yielded a full average crop. Rice was estimated at 10—16 annas; juár and bájri at 9—11 annas.

## Kaira, 1892.

| Rain Periods. | Kaira. | | Mehmadabad. | | Mátar. | | Nadia'd. | | Kapadvanj. | | Tha'sra. | | A'nand. | | Borsad. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. .. .. | .. | .. | .. | .. | 0·02 | .. | .. | .. | .. | .. | 0·18 | 1 | 0·05 | .. | .. | .. |
| Ante-Monsoon .. .. .. | 0·01 | .. | .. | .. | .. | .. | .. | .. | 0·03 | .. | 0·02 | .. | 0·03 | .. | 0·25 | 1 |
| Monsoon-Kharif.. .. .. | 29·01 | 26 | 22·86 | 28 | 33·46 | 25 | 29·27 | 28 | 23·54 | 28 | 19·09 | 28 | 25·69 | 27 | 28·33 | 28 |
| Monsoon-Rabi .. .. .. | 29·43 | 21 | 32·55 | 25 | 27·14 | 18 | 29·79 | 25 | 25·98 | 22 | 24·37 | 21 | 24·42 | 23 | 31·15 | 24 |
| Late Rains .. .. .. | .. | .. | .. | .. | .. | .. | 0·02 | .. | .. | .. | 0·05 | .. | 0·20 | 1 | .. | .. |
| Total .. | 58·45 | 47 | 55·41 | 53 | 60·62 | 43 | 59·08 | 53 | 49·55 | 50 | 43·71 | 50 | 50·39 | 51 | 59·73 | 53 |
| Average .. | 38·02 | 26 | 34·29 | 22 | 35·92 | 22 | 37·63 | 28 | 35·14 | 29 | 33·70 | 27 | 35·61 | 28 | 36·80 | 29 |

*General characteristics.*—The district is mostly one unbroken alluvial plain. In the north and north-east patches of rich rice land; the centre, a tract of most fertile soil yielding the choicest crops; and westward a bare, though well cultivated, tract of rice land.

*Remarks.*—Rainy days over-numerous. Rainfall throughout above average. Fair showers of Mrig were useful for preparing land and for sowing rice, kodra, &c. But A'rdra rain held off and sowings soon retarded and seedlings began to wither. Relief came from the 2nd week of July, the fall then being seasonable and sufficient for transplantation of rice and for sowing juár, bájri, &c. August rain was excellent for standing crops, which were thriving till harmful heavy rain came in early September, especially untimely for bájri, which was almost ripe for harvest. A break followed in Hast, which was very favourable for weeding of tobacco, reaping of bájri and sowing of rabi crops. It was also beneficial to standing crops. Chitra rain about 20th October, though slightly injurious to reaped rice lying in fields, was on the whole beneficial to rabi crops. Season was on the whole fairly good. Outturn of kharif crops was estimated at 9—13 annas, that of rabi at 12 annas.

## Panch Maha'ls, 1892.

| Rain Periods. | Godhra. | | Kálol. | | Ha'lol. | | Dohad. | | Jha'lod. | | Jambughoda. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains .. | 0·16 | 1 | 0·06 | .. | .. | .. | 0·03 | .. | .. | .. | 0·01 | .. |
| Ante-Monsoon .. | 0·04 | .. | 0·03 | .. | 1·10 | 1 | .. | .. | 0·11 | 1 | 0·39 | 1 |
| Monsoon-Kharif .. | 22·77 | 26 | 18·45 | 24 | 22·75 | 31 | 16·49 | 23 | 14·96 | 23 | 24·75 | 31 |
| Monsoon-Rabi .. | 21·56 | 19 | 29·90 | 20 | 40·70 | 26 | 23·26 | 22 | 22·88 | 22 | 29·64 | 21 |
| Late Rains .. .. | 0·19 | 1 | 0·02 | .. | .. | .. | 0·10 | .. | 1·59 | 3 | 0·08 | .. |
| Total .. | 44·72 | 47 | 48·46 | 44 | 64·55 | 58 | 39·88 | 45 | 39·54 | 49 | 54·87 | 53 |
| Average .. | 40·71 | 34 | 39·69 | 37 | 43·39 | 37 | 29·60 | 38 | 30·16 | 33 | 48·56 | 42 |

*General characteristics.*—Rainfall lighter and later in the east than in the western division.

*Remarks.*—Rainfall throughout above average. Fair showers of Mrig were favourable for commencing kharif sowings, which, however, soon retarded owing to break in A'rdra. General heavy rain came in July, being seasonable and sufficient for rice transplantation and for completing kharif sowings. Rain in August was generally beneficial, but the abnormally heavy fall of early September (Purva) was injurious to all crops except rice. The partial break in Hast was very valuable for kharif crops suffering from excessive moisture, as well as for rabi sowings. Chitra rain in October was generally light and, though slightly injurious to reaped rice lying in fields in Hálol, was on the whole beneficial to rabi crops, which would have turned out very good had not the untimely rain in February slightly spoiled them. Season was on the whole fairly good. Kharif outturn was generally estimated at 8—14 annas and rabi outturn at 10—16 annas, except in Kálol and Hálol, where both the outturns were reduced by 4 annas.

## Ahmadabad, 1892.

| Rain Periods. | Ahmadabad. | | Para'ntij. | | Moda'sa. | | Sa'nand. | | Viramga'm. | | Dholka. | | Dhandhuka. | | Gogha. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. | Fall. | Rainy days. |
| | In. | | In. | | In. | | In. | | In. | | In. | | In. | | In. | |
| Early Rains ... ... | ... | ... | 0·18 | 1 | ... | ... | 0·13 | 1 | 0·09 | ... | 0·07 | ... | ... | ... | ... | ... |
| Ante-Monsoon ... | ... | ... | 0·71 | 1 | ... | ... | 0·37 | 2 | 0·07 | ... | 0·01 | ... | 0·82 | 1 | 0·15 | 1 |
| Monsoon-Kharif ... | 23·85 | 26 | 23·08 | 33 | 17·29 | 33 | 16·46 | 28 | 25·69 | 24 | 25·31 | 26 | 13·20 | 24 | 13·74 | 18 |
| Monsoon-Rabi ... | 27·33 | 22 | 20·91 | 15 | 31·51 | 23 | 27·13 | 22 | 29·21 | 23 | 24·31 | 19 | 22·95 | 22 | 19·04 | 21 |
| Late Rains ... ... | ... | ... | ... | ... | ... | ... | 0·04 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total ... | 51·18 | 48 | 44·88 | 50 | 48·80 | 56 | 44·13 | 53 | 55·06 | 47 | 49·70 | 45 | 36·97 | 47 | 32·93 | 40 |
| Average ... | 27·95 | 20 | 27·25 | 32 | 33·78 | 36 | 27·96 | 22 | 28·98 | 24 | 34·19 | 27 | 27·43 | 25 | 25·70 | 32 |

*General characteristics.*—Except in the hilly parts of Modása, where the supply is sometimes considerable, the rainfall throughout the district is generally very light.

*Remarks.*—Rainy days very numerous. Rainfall throughout above average. Fair showers of Mrig were useful for preparing land and commencing kharif sowings in places. General sowing rain came in Punarvasu in July, and sowings of juár, bájri, &c., nearly completed. Rainfall in August, especially that of A'shlesha, was heavy and while not needed for other kharif crops, was very favourable for rice transplantation. In September very heavy rain fell in Purva, affecting cotton, juár and bájri in particular. The most needed break came at end of September and was throughout favourable for reaping of kharif and sowing of rabi crops. Except a few cents of Chitra in middle of October no rain fell further on, and rabi crops turned out well owing to ample moisture produced by heavy rain in August and September. Season was on the whole fairly good. Though outturn of juár, bájri and cotton was reduced to half the average, rice was generally good (8—14 annas). Rabi outturn was 10—13 annas everywhere.

# STATISTICS.

## B.—AGRICULTURAL.

I.—Area of Available Statistics.

II.—Area, Cultivated and Uncultivated.

III.—Crops.

IV.—Irrigation.

V.—Agricultural Stock.

II.A.—Details of "Fallow."

III.A.—Details under Kharif and Rabi Crops.

III.B.—Principal Fruit-bearing Trees.

# I.—Area of Available Statistics, 1892-93.

| No. | District. | Number and Area of Villages.* | | | | | | Villages for which Statistics are available. | | | | | | | | Villages for which Statistics are not available. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Government. | | Alienated. | | Total. | | Surveyed Government Rayatwári. | | Other Government. | | Surveyed Alienated. | | Total. | | Government. | | Alienated. | | Total. | |
| | | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. |
| | 1 | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... ... | 832 | 2,318,956 | 52 | 123,518 | 884 | 2,442,474 | 447 | 1,054,129 | 385 | 1,264,827 | 36 | 98,917 | 868 | 2,417,873 | ... | ..... | 16 | 24,601 | 16 | 24,601 |
| 2 | Kaira ... ... ... ... | 563 | 994,259 | 28 | 27,464 | 591 | 1,021,723 | 436 | 757,834 | 92 | 178,298 | ... | ..... | 528 | 936,132 | 35 | 58,127 | 28 | 27,464 | 63 | 85,591 |
| 3 | Panch Mahâls ... ... ... | 611½ | 901,414 | 79½ | 126,476 | 691 | 1,027,890 | 403 | 626,447 | 149½ | 198,181 | 44½ | 72,563 | 597 | 897,191 | 59 | 76,786 | 35 | 53,913 | 94 | 130,699 |
| 4 | Broach ... ... ... ... | 408 | 918,179 | 15 | 18,724 | 423 | 936,903 | 407 | 917,000 | 1 | 1,179 | ... | ..... | 408 | 918,179 | ... | ..... | 15 | 18,724 | 15 | 18,724 |
| 5 | Surat ... ... ... ... | 820½ | 1,026,824 | 32½ | 31,055 | 853 | 1,057,879 | 810½ | 1,014,589 | 10 | 12,235 | 4½ | 5,254 | 825 | 1,032,078 | ... | ..... | 28 | 25,801 | 28 | 25,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... ... | 3,223 | 5,446,233 | 111½ | 212,544 | 3,334½ | 5,658,777 | 2,691½ | 4,639,254 | 167 | 314,209 | 63½ | 109,091 | 2,922 | 5,062,554 | 364½ | 492,770 | 48 | 103,453 | 412½ | 596,223 |
| 7 | Násik ... ... ... ... | 1,531 | 3,450,862 | 165 | 271,131 | 1,696 | 3,721,993 | 1,590 | 3,396,410 | ... | ..... | 80 | 167,246 | 1,580 | 3,563,656 | 31 | 54,452 | 85 | 103,885 | 116 | 158,337 |
| 8 | Ahmadnagar ... ... ... | 1,226½ | 3,678,959 | 147½ | 538,263 | 1,374 | 4,217,222 | 1,223½ | 3,672,341 | ... | ..... | 110 | 440,388 | 1,333½ | 4,112,729 | 3 | 6,618 | 37½ | 97,875 | 40½ | 104,493 |
| 9 | Poona ... ... ... ... | 1,005¾ | 2,876,355 | 198¼ | 505,092 | 1,204 | 3,381,447 | 1,003¾ | 2,873,847 | ... | ..... | 162¼ | 468,649 | 1,166 | 3,342,496 | 2 | 2,508 | 36 | 36,443 | 38 | 38,951 |
| 10 | Sholápur ... ... ... ... | 665 | 2,697,396 | 52 | 209,607 | 717 | 2,907,003 | 665 | 2,697,396 | ... | ..... | 52 | 209,607 | 717 | 2,907,003 | ... | ..... | ... | ..... | ... | ..... |
| 11 | Sátára ... ... ... ... | 963 | 2,478,970 | 395 | 606,712 | 1,358 | 3,085,682 | 962 | 2,462,503 | ... | ..... | 214 | 393,219 | 1,176 | 2,855,722 | 1 | 16,467 | 181 | 213,493 | 182 | 229,960 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... ... ... | 913 | 2,347,345 | 221 | 537,162 | 1,134 | 2,884,507 | 913 | 2,347,345 | ... | ..... | 161 | 466,965 | 1,074 | 2,814,310 | ... | ..... | 60 | 70,197 | 60 | 70,197 |
| 13 | Bijápur ... ... ... ... | 1,011 | 3,205,705 | 162 | 422,032 | 1,173 | 3,627,737 | 1,011 | 3,205,705 | ... | ..... | 155 | 395,560 | 1,166 | 3,601,265 | ... | ..... | 7 | 26,472 | 7 | 26,472 |
| 14 | Dhárwár ... ... ... ... | 1,289 | 2,689,256 | 184 | 256,580 | 1,473 | 2,945 836 | 1,289 | 2,689,256 | ... | ..... | 137 | 180,871 | 1,426 | 2,870,127 | ... | ..... | 47 | 75,709 | 47 | 75,709 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... ... | 1,605 | 2,180,294 | 91 | 110,777 | 1,696 | 2,291,071 | 1,588 | 2,169,878 | 17 | 10,416 | 29 | 38,456 | 1,634 | 2,218,750 | ... | ..... | 62 | 72,321 | 62 | 72,321 |
| 16 | Kolába ... ... ... ... | 1,539 | 1,322,067 | 93 | 45,938 | 1,632 | 1,368,005 | 1,047 | 788,301 | 489 | 524,384 | 9 | 5,502 | 1,545 | 1,318,187 | 3 | 9,382 | 84 | 40,436 | 87 | 49,818 |
| 17 | Ratnágiri ... ... ... ... | 1,270½ | 2,376,946 | 59 | 118,996 | 1,329½ | 2,495,942 | 115½ | 276,125 | 59 | 98,455 | 3 | 7,167 | 177½ | 381,747 | 1,096 | 2,002,366 | 56 | 111,829 | 1,152 | 2,114,195 |
| 18 | Kánara ... ... ... ... | 1,416 | 2,522,770 | ... | ..... | 1,416 | 2,522,770 | 1,416 | 2,522,770 | ... | ..... | ... | ..... | 1,416 | 2,522,770 | ... | ..... | ... | ..... | ... | ..... |
| | Total, A. ... | 20,892¾ | 43,432,790 | 2,086¼ | 4,162,071 | 22,979 | 47,594,861 | 17,928¾ | 38,111,130 | 1,369½ | 2,602,184 | 1,260¾ | 3,059,455 | 20,559 | 43,772,769 | 1594½ | 2,719,476 | 825½ | 1,102,616 | 2,420 | 3,822,092 |
| | **B.—Sind.** | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | 858 | 9,062,332 | 13 | 32,713 | 871 | 9,095,045 | 774 | 4,441,434 | 62 | 19,51,700 | 12 | 23,854 | 848 | 6,416,988 | 22 | 2,669,198 | 1 | 8,859 | 23 | 26,78,057 |
| 20 | Hyderabad ... ... ... ... | 1,458 | 5,476,254 | 58 | 267,452 | 1,516 | 5,743,706 | 1,458 | 5,476,254 | ... | ..... | 58 | 267,452 | 1,516 | 5,743,706 | ... | ..... | ... | ..... | ... | ..... |
| 21 | Shikárpur ... ... ... ... | 1,179 | 4,782,709 | 18 | 469,972 | 1,197 | 5,252,681 | 1,160 | 4,672,574 | ... | ..... | 16 | 467,305 | 1,176 | 5,139,879 | 19 | 110,135 | 2 | 2,667 | 21 | 112,802 |
| 22 | Upper Sind Frontier ... ... | 298 | 1,574,892 | 7 | 40,718 | 305 | 1,615,610 | 232 | 686,094 | 1 | 120,531 | 6 | 27,333 | 239 | 833,958 | 65 | 768,267 | 1 | 13,385 | 66 | 781,652 |
| 23 | Thar and Párkar... ... ... | 291 | 8,145,500 | ... | ..... | 291 | 8,145,500 | ... | ..... | 291 | 8,145,500 | ... | ..... | 291 | 8,145,500 | ... | ..... | ... | ..... | ... | ..... |
| | Total, B. ... | 4,084 | 29,041,687 | 96 | 810,855 | 4,180 | 29,852,542 | 3,624 | 15,276,356 | 354 | 10,217,731 | 92 | 785,944 | 4,070 | 26,280,031 | 106 | 3,547,600 | 4 | 24,911 | 110 | 3,572,511 |
| | Grand Total ... | 24,976¾ | 72,474,477 | 2,182¼ | 4,972,926 | 27,159 | 77,447,403 | 21,552¾ | 53,387,486 | 17,23½ | 12,819,915 | 13,52¾ | 3,845,399 | 24,629 | 70,052,800 | 1,700½ | 6,267,076 | 829½ | 1,127,527 | 2,530 | 7,394,603 |

* Exclusive of Foreign Territory, Feudatory and Tributary States.

B 971—5 ap

# II.—Area Cultivated and Uncultivated, 1892-93.

| No. | District. | | Total area as in columns 5, 6, 7 & 8 of Return No. 1. | Cultivated Area. Gross area cropped. | Deduct area cropped more than once. | Remainder, net area cropped. | Add current Fallow. | Total columns 5 and 6. | Details of column 7. Assessed Land. | Unassessed Land. | Uncultivated Area. Available for cultivation. Assessed Land. | Unassessed Land. | Not available for cultivation. Forest | Other. | Total columns 10 to 13. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | A.—Bombay Presidency Proper. | | Acres. | | | | | Acres. | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... ... | Rayatwári ... ... | 1,054,129 | 730,063 | 24,201 | 705,862 | 81,335 | 787,197 | 784,453 | 2,744 | 61,731 | 10,723 | 21,649 | 172,829 | 266,932 |
| | | Other Government. | 1,264,827 | 638,368 | 3,887 | 634,481 | 355,368 | 989,849 | 989,185 | 664 | ..... | 6,631 | ..... | 268,347 | 274,978 |
| | | Alienated ... ... | 98,917 | 54,344 | 216 | 54,128 | 44,708 | 98,836 | 98,836 | ..... | ..... | ..... | ..... | 81 | 81 |
| | | Total ... | 2,417,873 | 1,422,775 | 28,304 | 1,394,471 | 481,411 | 18,75,882 | 1,872,474 | 3,408 | 61,731 | 17,354 | 21,649 | 441,257 | 541,991 |
| 2 | Kaira ... ... ... | Rayatwári ... ... | 757,834 | 588,395 | 36,33 1 | 552,064 | 39,123 | 591,187 | 590,634 | 553 | 66,630 | 1,043 | ..... | 98,974 | 166,647 |
| | | Other Government. | 178,298 | 163,921 | 7,427 | 156,494 | 6,166 | 162,660 | 162,606 | 54 | 254 | ..... | ..... | 15,384 | 15,638 |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... |
| | | Total ... | 936,132 | 752,316 | 43,758 | 708,558 | 45,289 | 753,847 | 753,240 | 607 | 66,884 | 1,043 | ... | 114,358 | 182,285 |
| 3 | Panch Maháls ... ... | Rayatwári ... ... | 626,447 | 311,235 | 66,224 | 245,011 | 28,881 | 273,892 | 270,710 | 3,182 | 66,265 | 59,571 | 186,426 | 40,293 | 352,555 |
| | | Other Government. | 198,181 | 74,621 | 7,385 | 67,236 | 83,674 | 150,910 | 150,649 | 261 | ..... | 1,013 | 16,730 | 29,528 | 47,271 |
| | | Alienated ... ... | 72,563 | 42,533 | 6,928 | 35,605 | 28,686 | 64,291 | 64,291 | ..... | 740 | ..... | ..... | 7,532 | 8,272 |
| | | Total .. | 897,191 | 428,389 | 80,537 | 347,852 | 141,241 | 489,093 | 485,650 | 3,443 | 67,005 | 60,584 | 203,156 | 77,353 | 408,098 |
| 4 | Broach ... ... .. | Rayatwári ... ... | 917,000 | 577,095 | 1,559 | 575,536 | 74,436 | 649,972 | 641,406 | 8,566 | 23,038 | 1,669 | 1 | 242,320 | 267,028 |
| | | Other Government. | 1,179 | 841 | ..... | 841 | 302 | 1,143 | 1,143 | ..... | ..... | ..... | ..... | 36 | 36 |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 918,179 | 577,936 | 1,559 | 576,377 | 74,738 | 651,115 | 642,549 | 8,566 | 23,038 | 1,669 | 1 | 242,356 | 267,064 |
| 5 | Surat ... ... ... | Rayatwári ... ... | 1,014,589 | 552,906 | 68,642 | 484,264 | 241,463 | 725,727 | 723,695 | 2,032 | 34,315 | 28,854 | 44,716 | 180,977 | 288,862 |
| | | Other Government. | 12,235 | 5,971 | 662 | 5,309 | 4,375 | 9,684 | 9,684 | ..... | 665 | 759 | ..... | 1,127 | 2,551 |
| | | Alienated ... ... | 5,254 | 3,830 | 20 | 3,810 | 1,171 | 4,981 | 4,975 | 6 | 130 | ..... | ..... | 143 | 273 |
| | | Total ... | 1,032,078 | 562,707 | 69,324 | 493,383 | 247,009 | 740,392 | 738,354 | 2,038 | 35,110 | 29,613 | 44,716 | 182,247 | 291,686 |
| | *II.—Deccan.* | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... | Rayatwári ... ... | 4,639,254 | 2,952,317 | 27,712 | 2,924,605 | 132,618 | 3,057,223 | 3,051,657 | 5,566 | 388,324 | 245,968 | 366,615 | 581,124 | 1,582,031 |
| | | Other Government. | 314,209 | 54,721 | 10 | 54,711 | 353 | 55,064 | 3,106 | 51,958 | 5 | 131,934 | 126,591 | 615 | 259,145 |
| | | Alienated ... ... | 109,091 | 73,290 | 308 | 72,982 | 9,085 | 82,067 | 82,023 | 44 | 7,664 | 6,362 | 750 | 12,248 | 27,024 |
| | | Total ... | 5,062,554 | 3,080,328 | 28,030 | 3,052,298 | 142,056 | 3,194,354 | 3,136,786 | 57,568 | 395,993 | 384,264 | 493,956 | 593,987 | 1,868,200 |
| 7 | Násik ... ... ... | Rayatwári ... ... | 3,396,410 | 1,969,755 | 49,124 | 1,920,631 | 278,076 | 21,98,707 | 2,198,150 | 557 | 61,256 | 45,451 | 783,233 | 307,763 | 1,197,703 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 167,246 | 114,102 | 2,852 | 111,250 | 18,395 | 129,645 | 129,611 | 34 | 5,466 | 8,942 | 1,462 | 21,731 | 37,601 |
| | | Total ... | 3,563,656 | 2,083,857 | 51,976 | 2,031,881 | 296,471 | 23,28,352 | 2,327,761 | 591 | 66,722 | 54,393 | 784,695 | 329,494 | 12,35,304 |
| 8 | Ahmadnagar ... ... | Rayatwári ... ... | 3,672,341 | 2,490,523 | 68,930 | 2,421,593 | 3,03,785 | 27,25,378 | 2,725,017 | 361 | 44,966 | 7,162 | 539,448 | 355,387 | 946,963 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 440,388 | 320,789 | 4,450 | 316,339 | 47,266 | 363,605 | 363,594 | 11 | 8,516 | 3,859 | 331 | 64,077 | 76,783 |
| | | Total ... | 4,112,729 | 2,811,312 | 73,380 | 2,737,932 | 351,051 | 30,88,983 | 3,088,611 | 372 | 53,482 | 11,021 | 539,779 | 419,464 | 1,023,746 |
| 9 | Poona ... ... ... | Rayatwári ... ... | 2,878,847 | 1,863,446 | 84,947 | 1,778,499 | 307,885 | 20,86,384 | 2,086,304 | 80 | 11,126 | 1,704 | 448,457 | 326,176 | 787,463 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 468,649 | 328,744 | 17,766 | 310,978 | 64,727 | 375,705 | 375,476 | 229 | 97 | ..... | 1,729 | 91,118 | 92,944 |
| | | Total ... | 3,342,496 | 2,192,190 | 102,713 | 2,089,477 | 372,612 | 2,462,089 | 2,461,780 | 309 | 11,223 | 1,704 | 450,186 | 417,294 | 880,407 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... ... | Rayatwári ... ... | 2,697 396 | 20,42,234 | 32,263 | 2,009,971 | 275,489 | 2,285,460 | 2,285,228 | 232 | 17,136 | 1,126 | 177,655 | 216,019 | 411,936 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 209,607 | 151,380 | 2,413 | 148,967 | 26,074 | 175,041 | 174,914 | 127 | 125 | 3,353 | ..... | 31,088 | 34,566 |
| | | Total ... | 2,907,003 | 2,193,614 | 34,676 | 2,158,938 | 301,563 | 2,460,501 | 2,460,142 | 359 | 17,261 | 4,479 | 177,655 | 247,107 | 446,502 |
| 11 | Sátara ... ... ... | Rayatwári... ... | 2,462,503 | 1,562,448 | 107,586 | 1,454,862 | 325,778 | 1,780,640 | 1,780,400 | 240 | 22,937 | 4,727 | 425,987 | 228,212 | 681,863 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 393,219 | 258,037 | 23,147 | 234,890 | 101,125 | 336,015 | 336,000 | 15 | 466 | 3,350 | 12,385 | 41,003 | 57,204 |
| | | Total ... | 2,855,722 | 1,820,485 | 130,733 | 1,689,752 | 426,903 | 2,116,655 | 2,116,400 | 255 | 23,403 | 8,077 | 438,372 | 269,215 | 739,067 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | |
| 12 | Belgaum ... ... | Rayatwári ... ... | 2,347,345 | 1,468,920 | 31,554 | 1,437,366 | 248,026 | 1,685,392 | 1,683,364 | 2,028 | 52,583 | 18,792 | 438,900 | 151,678 | 661,953 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 466,965 | 325,395 | 3,812 | 321,583 | 112,043 | 433,626 | 433,619 | 7 | ..... | 1,469 | 2,907 | 28,963 | 33,339 |
| | | Total ... | 2,814,310 | 1,794,315 | 35,366 | 1,758,949 | 360,069 | 2,119,018 | 2,116,983 | 2,035 | 52,583 | 20,261 | 441,807 | 180,641 | 695,292 |
| 13 | Bijápur ... ... ... | Rayatwári... ... | 3,205,705 | 2,544,473 | 12,608 | 2,531,865 | 253,252 | 2,785,117 | 2,785,010 | 107 | 69,201 | 18,996 | 162,451 | 169,940 | 420,588 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 395,560 | 298,259 | 673 | 297,586 | 36,298 | 333,884 | 333,742 | 142 | 10,635 | 1,155 | 24,843 | 25,043 | 61,676 |
| | | Total .. | 3,601,265 | 2,842,732 | 13,281 | 2,829,451 | 289,550 | 3,119,001 | 3,118,752 | 249 | 79,836 | 20,151 | 187,294 | 194,983 | 482,264 |
| 14 | Dhárwár... ... ... | Rayatwári ... ... | 2,689,256 | 2,015,275 | 47,898 | 1,967,377 | 207,686 | 2,175,063 | 2,174,898 | 165 | 47,194 | 1 | 276,336 | 190,662 | 514,193 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | 180,871 | 111,101 | 1,889 | 109,212 | 30,072 | 139,284 | 139,010 | 274 | 11,110 | 14,329 | ..... | 16,148 | 41,587 |
| | | Total ... | 2,870,127 | 2,126,376 | 49,787 | 2,076,589 | 237,758 | 2,314,347 | 2,313,908 | 439 | 58,304 | 14,330 | 276,336 | 206,810 | 555,780 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | |
| 15 | Thána ... ... ... | Rayatwári... ... | 2,169,878 | 464,556 | 4,806 | 459,750 | 432,016 | 891,766 | 886,107 | 5,659 | 52,718 | 68,506 | 478,546 | 678,342 | 1,278,112 |
| | | Other Government | 10,416 | 1,070 | 7 | 1,063 | 7,629 | 8,692 | 8,692 | ..... | 13 | 1,201 | 197 | 313 | 1,724 |
| | | Alienated ... ... | 38,456 | 7,593 | 50 | 7,543 | 20,542 | 28,085 | 28,084 | 1 | ..... | 828 | ..... | 9,543 | 10,371 |
| | | Total ... | 2,218,750 | 473,219 | 4,863 | 468,356 | 460,187 | 928,543 | 922,883 | 5,660 | 52,731 | 70,535 | 478,743 | 688,198 | 1,290,207 |
| 16 | Kolába ... ... ... | Rayatwári ... ... | 783,301 | 2,38,692 | 7,296 | 231,396 | 176,460 | 407,856 | 405,499 | 2,357 | 4,330 | 41,309 | 193,738 | 141,068 | 380,445 |
| | | Other Government. | 524,384 | 160,351 | 4,209 | 156,142 | 135,928 | 292,070 | 291,913 | 157 | ..... | 11,088 | 88,522 | 132,704 | 232,314 |
| | | Alienated ... ... | 5,502 | 1,972 | 32 | 1,940 | 2,299 | 4,239 | 4,239 | ..... | ..... | 608 | ..... | 655 | 1,263 |
| | | Total ... | 1,318,187 | 401,015 | 11,537 | 389,478 | 314,687 | 704,165 | 701,651 | 2,514 | 4,330 | 53,005 | 282,260 | 274,427 | 614,022 |
| 17 | Ratnágiri ... ... | Rayatwári... ... | 276,125 | 100,089 | 6,086 | 94,003 | 84,869 | 178,872 | 178,781 | 91 | 650 | 2,761 | 6,680 | 87,162 | 97,253 |
| | | Other Government. | 98,455 | 25,204 | 1,077 | 24,127 | 37,981 | 62,108 | 62,108 | ..... | 71 | 959 | 3,151 | 32,166 | 36,347 |
| | | Alienated ... ... | 7,167 | 3,358 | 208 | 3,150 | 1,502 | 4,652 | 4,652 | ..... | ..... | 572 | ..... | 1,943 | 2,515 |
| | | Total ... | 381,747 | 128,651 | 7,371 | 121,280 | 124,352 | 245,632 | 245,541 | 91 | 721 | 4,292 | 9,831 | 121,271 | 136,115 |
| 18 | Kánara ... ... ... | Rayatwári... ... | 2,522,770 | 251,257 | 13,635 | 237,622 | 88,903 | 326,525 | 326,435 | 90 | 58,488 | 1,413 | 1,942,802 | 193,542 | 2,196,245 |
| | | Other Government. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 2,522,770 | 251,257 | 13,635 | 237,622 | 88,903 | 326,525 | 326,435 | 90 | 58,488 | 1,413 | 1,942,802 | 193,542 | 2,196,245 |
| | Total, A ... | Rayatwári ... .. | 38,111,130 | 22,723,679 | 691,402 | 22,032,277 | 3,580,081 | 25,612,358 | 25,577,748 | 34,610 | 1,082,888 | 559,776 | 6,493,640 | 4,362,468 | 12,498,772 |
| | | Other Government. | 2,602,184 | 1,125,068 | 24,664 | 1,100,404 | 631,776 | 1,732,180 | 1,679,086 | 53,094 | 1,008 | 153,585 | 235,191 | 480,220 | 879,004 |
| | | Alienated ... ... | 3,059,455 | 2,094,727 | 64,764 | 2,029,963 | 543,993 | 2,573,956 | 2,573,066 | 890 | 44,949 | 44,827 | 44,407 | 351,316 | 485,499 |
| | | Total ... | 43,772,769 | 25,943,474 | 780,830 | 25,162,644 | 4,755,850 | 29,918,494 | 29,829,900 | 88,594 | 1,128,845 | 758,188 | 6,773,238 | 5,194,004 | 13,854,275 |
| | B.—Sind. | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 6,416,988 | 515,876 | 37,351 | 478,525 | 439,142 | 917,667 | 775,541 | 142,126 | 85,624 | 1,028,073 | 114,048 | 4,271,576 | 5,499,321 |
| 20 | Hyderabad ... ... ... ... ... | | 5,743,706 | 898,208 | 18,805 | 879,403 | 1,374,322 | 2,253,725 | 1,837,851 | 415,874 | 432,993 | 1,836,634 | 128,938 | 1,091,416 | 3,489,981 |
| 21 | Shikárpur ... ... ... ... ... | | 5,139,879 | 1,158,804 | 178,958 | 979,846 | 864,772 | 1,844,618 | 1,815,749 | 28,869 | 157,276 | 2,050,904 | 311,325 | 775,756 | 3,295,261 |
| 22 | Upper Sind Frontier ... ... ... | | 833,958 | 212,759 | 12,928 | 199,831 | 322,964 | 522,795 | 440,628 | 82,167 | 30,929 | 120,208 | 46,404 | 113,622 | 311,163 |
| 23 | Thar and Párkar ... ... ... ... | | 8,145,500 | 615,033 | 7,962 | 607,071 | 845,278 | 1,452,349 | 1,127,494 | 324,855 | 40,253 | 356,479 | 133,561 | 6,162,858 | 6,693,151 |
| | | Total, B. ... | 26,280,031 | 3,400,680 | 256,004 | 3,144,676 | 3,846,478 | 6,991,154 | 5,997,263 | 993,891 | 747,075 | 5,392,298 | 734,276 | 12,415,228 | 19,288,837 |
| | | Grand Total ... | 70,052,800 | 29,344,154 | 1,036,834 | 28,307,320 | 8,602,328 | 36,909,648 | 35,827,163 | 1,082,485 | 1,875,920 | 6,150,486 | 7,507,514 | 17,609,232 | 33,143,152 |

# III.—Crops, 1892-93.

| No. | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári (Great Millet), Sorghum vulgare, &c | Bájri (Spiked Millet), Penniscetum Typhoideum. | Paddy (Bhát), Oryza sativa. | Wheat (Gahu), Triticum æstivum. | Barley (Jav, Sátu), Hordeum vulgare. | Maize (Maka), Zea mays. | Kodra (Harik), Paspalum scrobiculatum. | Rági (Nágli), Eleusine coracana. | Rále, Káng (Italian Millet), Panicum Italicum. | Varai (Sáva and Barag) Panicum maliaceum P. miliare. | Banti, Barti, Panicum flavidum. | Bhádli, Panicum piloseum. | Amaranth (Rájgira), Amaranthus frumentaceus. | Others. | Total I. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 176,994 | 137,174 | 70,489 | 127,688 | 15,486 | 3,002 | 8,610 | 1,723 | 35 | 6,350 | 9,416 | ..... | 42 | 49 | 557,058 |
| | | Other Government ... | 175,079 | 99,624 | 15,711 | 102,516 | 5,567 | 785 | 7,941 | 761 | 97 | 7,217 | 16,794 | ..... | ..... | ..... | 432,092 |
| | | Alienated ... | 12,060 | 6,494 | 2,003 | 7,925 | 526 | 280 | 247 | 25 | ..... | 46 | 971 | ..... | ..... | ..... | 30,577 |
| | | Total ... | 364,133 | 243,292 | 88,203 | 238,129 | 21,579 | 4,067 | 16,798 | 2,509 | 132 | 13,613 | 27,181 | ... | 42 | 49 | 1,019,727 |
| 2 | Kaira ... | Rayatwári ... | 52,897 | 186,456 | 98,467 | 16,408 | 6,112 | 376 | 66,753 | 48,080 | 230 | 559 | 1,760 | ..... | 159 | 4 | 478,261 |
| | | Other Government ... | 14,559 | 46,312 | 13,760 | 1,275 | 295 | 27 | 34,275 | 10,340 | 19 | 294 | 19 | ..... | 64 | 1 | 121,240 |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 67,456 | 232,768 | 112,227 | 17,683 | 6,407 | 403 | 101,028 | 58,420 | 249 | 853 | 1,779 | ... | 223 | 5 | 599,501 |
| 3 | Panch Mahále ... | Rayatwári ... | 4,521 | 33,014 | 42,677 | 18,337 | 1,413 | 73,182 | 13,456 | 10,442 | 32 | 1,686 | 11,017 | 129 | ..... | 767 | 210,673 |
| | | Other Government ... | 2,501 | 9,984 | 11,125 | 2,073 | 290 | 16,644 | 4,951 | 3,673 | ..... | 1,203 | 3,291 | 150 | 1 | 290 | 56,176 |
| | | Alienated ... | 478 | 3,969 | 5,162 | 1,854 | 108 | 12,412 | 3,500 | 1,713 | 217 | 708 | 1,433 | 74 | ..... | 50 | 31,678 |
| | | Total ... | 7,500 | 46,967 | 58,964 | 22,264 | 1,811 | 102,238 | 21,907 | 15,828 | 249 | 3,597 | 15,741 | 353 | 1 | 1,107 | 298,527 |
| 4 | Broach ... | Rayatwári ... | 95,725 | 21,286 | 20,436 | 101,341 | ..... | 14 | 8,760 | 148 | 6 | 79 | 26 | ..... | 9 | ..... | 247,830 |
| | | Other Government ... | 127 | ..... | 1 | 40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 168 |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 95,852 | 21,286 | 20,437 | 101,381 | ... | 14 | 8,760 | 148 | 6 | 79 | 26 | ... | 9 | ... | 247,998 |
| 5 | Surat ... | Rayatwári ... | 116,688 | 7,673 | 106,179 | 46,881 | ..... | 2 | 35,652 | 12,899 | 4 | 32 | 607 | 224 | 1 | 250 | 327,092 |
| | | Other Government ... | 1,830 | 7 | 1,016 | 4 | ..... | ..... | 383 | 104 | ..... | ..... | ..... | ..... | ..... | ..... | 3,344 |
| | | Alienated ... | 2,848 | 7 | 301 | 1 | ..... | ..... | 108 | 52 | ..... | ..... | ..... | ..... | ..... | ..... | 3,317 |
| | | Total ... | 121,366 | 7,687 | 107,496 | 46,886 | ... | 2 | 36,143 | 13,055 | 4 | 32 | 607 | 224 | 1 | 250 | 333,753 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 515,603 | 653,445 | 15,878 | 252,379 | 3 | 2,179 | 2,209 | 7,014 | 341 | 5,106 | 1,533 | 1,355 | 185 | 40 | 1,457,270 |
| | | Other Government ... | 2,447 | 5,883 | 12,049 | 6,448 | ..... | 298 | 1,792 | 2,086 | 24 | 570 | 2,218 | 513 | 4 | 55 | 34,387 |
| | | Alienated ... | 17,752 | 12,667 | 1,213 | 3,877 | ..... | 297 | ..... | 415 | 2 | 40 | 79 | 155 | 29 | ..... | 36,526 |
| | | Total ... | 535,802 | 671,995 | 29,140 | 262,704 | 3 | 2,774 | 4,001 | 9,515 | 367 | 5,716 | 3,830 | 2,023 | 218 | 95 | 1,528,183 |
| 7 | Násik ... | Rayatwári ... | 94,797 | 755,681 | 50,869 | 290,424 | ..... | 1,756 | 1 | 142,353 | 561 | 44,947 | 88 | 2,964 | 175 | 1 | 1,384,617 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 4,370 | 38,627 | 2,233 | 26,833 | ..... | 93 | ..... | 5,883 | 10 | 2,377 | 10 | 239 | 13 | ..... | 80,688 |
| | | Total ... | 99,167 | 794,308 | 53,102 | 317,257 | ... | 1,849 | 1 | 148,236 | 571 | 47,324 | 98 | 3,203 | 188 | 1 | 1,465,305 |
| 8 | Ahmadnagar ... | Rayatwári ... | 696,025 | 891,242 | 12,835 | 216,106 | 212 | 630 | 128 | 24,430 | 5,228 | 12,284 | 53 | 4,773 | 305 | 579 | 1,864,830 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 107,452 | 99,919 | 215 | 19,610 | 28 | 107 | ..... | 4 | 368 | 27 | 2 | 22 | 19 | 13 | 227,786 |
| | | Total ... | 803,477 | 991,161 | 13,050 | 235,716 | 240 | 737 | 128 | 24,434 | 5,596 | 12,311 | 55 | 4,795 | 324 | 592 | 2,092,616 |
| 9 | Poona ... | Rayatwári ... | 530,485 | 678,316 | 60,384 | 98,808 | 1,149 | 2,592 | 323 | 53,747 | 1,013 | 39,383 | 21 | 6,024 | 100 | 4,721 | 1,477,066 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 93,815 | 135,960 | 7,056 | 16,905 | 155 | 96 | ..... | 5,756 | 91 | 2,080 | 5 | 622 | 25 | 566 | 263,132 |
| | | Total ... | 624,300 | 814,276 | 67,440 | 115,713 | 1,304 | 2,688 | 323 | 59,503 | 1,104 | 41,463 | 26 | 6,646 | 125 | 5,287 | 1,740,198 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur... | Rayatwári ... ... ... | 979,777 | 400,643 | 22,406 | 53,680 | 1,913 | 11,162 | 61 | 16 | 1,373 | 1,780 | ..... | 430 | 42 | 8,964 | 4,182,247 |
| | | Other Government... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | — | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 70,726 | 37,400 | 959 | 3,758 | 83 | 1,207 | ..... | 1 | 130 | 100 | ..... | 36 | ..... | 541 | 114,941 |
| | | Total ... | 1,050,503 | 438,043 | 23,365 | 57,438 | 1,996 | 12,369 | 61 | 17 | 1,503 | 1,880 | ..... | 466 | 42 | 9,505 | 1,597,188 |
| 11 | Sátára ... | Rayatwári ... ... ... | 429,453 | 488,772 | 28,379 | 52,708 | 3,889 | 8,074 | 16 | 47,221 | 22,060 | 41,166 | 9 | 13 | 511 | 5,686 | 1,127,957 |
| | | Other Government... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 78,804 | 59,214 | 9,313 | 8,798 | 731 | 1,672 | 1 | 12,542 | 6,555 | 10,627 | ..... | ..... | 307 | 348 | 188,912 |
| | | Total ... | 508,257 | 547,986 | 37,692 | 61,506 | 4,620 | 9,746 | 17 | 59,763 | 28,615 | 51,793 | 9 | 13 | 818 | 6,034 | 1,316,869 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... ... | 561,427 | 156,596 | 106,850 | 72,139 | 137 | 5,858 | 59 | 43,719 | 60,838 | 27,897 | 71 | ..... | 38 | 216 | 1,035,845 |
| | | Other Government... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 139,273 | 49,168 | 6,573 | 10,560 | 23 | 1,398 | ..... | 5,176 | 11,466 | 3,641 | ..... | ..... | 9 | ..... | 227,287 |
| | | Total ... | 700,700 | 205,764 | 113,423 | 82,699 | 160 | 7,256 | 59 | 48,895 | 72,304 | 31,538 | 71 | ..... | 47 | 216 | 1,263,132 |
| 13 | Bijápur ... | Rayatwári ... ... ... | 1,262,342 | 392,308 | 11,438 | 133,257 | 3 | 763 | 35 | 166 | 31,627 | 8,383 | ..... | ..... | 1 | 8 | 1,840,331 |
| | | Other Government... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 155,909 | 36,789 | 930 | 12,489 | ..... | 203 | ..... | 14 | 5,629 | 936 | ..... | ..... | ..... | ..... | 212,899 |
| | | Total ... | 1,418,251 | 429,097 | 12,368 | 145,746 | 3 | 966 | 35 | 180 | 37,256 | 9,319 | ..... | ..... | 1 | 8 | 2,053,230 |
| 14 | Dhárwár ... | Rayatwári ... ... ... | 683,825 | 5,608 | 136,691 | 206,197 | 17 | 38 | 64 | 41,129 | 86,495 | 35,818 | ..... | ..... | ..... | ..... | 1,195,882 |
| | | Other Government... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 40,242 | 338 | 17,601 | 6,548 | ..... | 1 | ..... | 4,138 | 6,137 | 2,265 | ..... | ..... | ..... | ..... | 77,270 |
| | | Total ... | 724,067 | 5,946 | 154,292 | 212,745 | 17 | 39 | 64 | 45,267 | 92,632 | 38,083 | ..... | ..... | ..... | ..... | 1,273,152 |
| | *IV.—Konkan* | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... ... ... | 57 | ..... | 294,098 | 148 | ..... | 68 | 12,510 | 62,732 | ..... | 26,810 | ..... | ..... | ..... | ..... | 396,423 |
| | | Other Government... ... | ..... | ..... | 933 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 933 |
| | | Alienated ... ... ... | ..... | ..... | 6,717 | ..... | ..... | ..... | ..... | 294 | — | 131 | ..... | ..... | ..... | ..... | 7,142 |
| | | Total ... | 57 | ... | 301,748 | 148 | ... | 68 | 12,510 | 63,026 | ... | 26,941 | ..... | ..... | ..... | ..... | 404,498 |
| 16 | Kolába ... | Rayatwári ... ... ... | ..... | ..... | 175,673 | ..... | ..... | ..... | 3,428 | 21,996 | 38 | 17,803 | ..... | ..... | ..... | ..... | 218,938 |
| | | Other Government... ... | ..... | ..... | 58,057 | ..... | ..... | ..... | 13,725 | 39,222 | ..... | 32,575 | ..... | ..... | ..... | ..... | 143,579 |
| | | Alienated ... ... ... | ..... | ..... | 1,641 | ..... | ..... | ..... | ..... | 146 | ..... | 104 | ..... | ..... | ..... | ..... | 1,891 |
| | | Total ... | ... | ... | 235,371 | ... | ... | ... | 17,153 | 61,364 | 38 | 50,482 | ..... | ..... | ..... | ..... | 364,408 |
| 17 | Ratnágiri... | Rayatwári ... ... ... | ..... | ..... | 35,387 | ..... | ..... | 1 | 14,442 | 16,830 | 20 | 8,230 | ..... | ..... | ..... | ..... | 74,910 |
| | | Other Government... ... | ..... | ..... | 7,186 | ..... | ..... | ..... | 4,271 | 5,810 | ..... | 3,805 | ..... | ..... | ..... | ..... | 21,072 |
| | | Alienated ... ... ... | ..... | ..... | 1,329 | ..... | ..... | ..... | 416 | 541 | ..... | 213 | ..... | ..... | ..... | ..... | 2,499 |
| | | Total ... | ... | ... | 43,902 | ... | ... | 1 | 19,129 | 23,181 | 20 | 12,248 | ..... | ..... | ..... | ..... | 98,481 |
| 18 | Kánara ... | Rayatwári ... ... ... | 1,636 | ..... | 195,009 | ..... | ..... | 18 | ..... | 6,715 | 107 | 350 | ..... | ..... | ..... | ..... | 203,835 |
| | | Other Government... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 1,636 | ... | 195,009 | ... | ... | 18 | ... | 6,715 | 107 | 350 | ..... | ..... | ..... | ..... | 203,835 |
| | Total, A ... | Rayatwári ... ... ... | 6,202,252 | 4,808,214 | 1,484,145 | 1,686,591 | 30,334 | 109,715 | 166,507 | 541,360 | 210,003 | 278,663 | 24,601 | 15,912 | 1,568 | 21,285 | 15,581,065 |
| | | Other Government... ... | 196,548 | 161,810 | 119,888 | 112,356 | 6,152 | 17,754 | 67,338 | 61,996 | 140 | 45,664 | 22,322 | 663 | 69 | 346 | 812,991 |
| | | Alienated ... ... ... | 723,729 | 480,552 | 63,246 | 119,1[illegible]8 | 1,654 | 17,766 | 4,272 | 36,700 | 30,605 | 23,295 | 2,500 | 1,148 | 402 | 1,518 | 1,506,545 |
| | | Total ... | 7,122,524 | 5,450,576 | 1,667,229 | 1,918,015 | 38,140 | 145,235 | 238,117 | 640,056 | 2,40,753 | 347,622 | 49,423 | 17,723 | 2,039 | 23,149 | 17,900,601 |
| | B.—Sind. | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... ... | | 104,828 | 39,592 | 147,640 | 72,911 | 19,933 | 583 | ... | 777 | 27 | 82 | ..... | ..... | ..... | ..... | 386,373 |
| 20 | Hyderabad... ... ... ... ... | | 91,131 | 348,233 | 159,321 | 66,403 | 6,322 | 150 | ... | 25 | 22 | 623 | ..... | ..... | ..... | ..... | 672,230 |
| 21 | Shikárpur ... ... ... ... | | 279,756 | 17,747 | 231,859 | 359,281 | 4,616 | 6 | ... | 55 | 551 | 16 | ..... | ..... | ..... | 1,523 | 895,410 |
| 22 | Upper Sind Frontier ... ... ... | | 79,991 | 18,239 | 10,458 | 22,004 | 368 | 22 | ... | 1 | 376 | ... | ..... | ..... | ..... | 320 | 131,779 |
| 23 | Thar and Párkar ... ... ... ... | | 3,849 | 435,799 | 92,518 | 23,216 | 234 | ... | ... | 2 | 5 | 212 | ..... | ..... | ..... | ..... | 555,835 |
| | | Total, B: ... | 559,555 | 859,610 | 641,796 | 543,815 | 31,473 | 761 | ... | 860 | 981 | 933 | ..... | ..... | ..... | 1,843 | 2,641,627 |
| | | Grand Total ... | 7,682,079 | 6,310,186 | 2,309,025 | 2,461,830 | 69,613 | 145,996 | 238,117 | 640,916 | 241,734 | 348,555 | 49,423 | 17,723 | 2,039 | 24,992 | 20,542,228 |

# III.—Crops, 1892-93—*continued.*

| No. | District | | II.—Pulses. Tur (Pigeon Pea), Cajanus Indicus. | Gram (Chana), Cicer arietinum. | Mug (Green Gram), Phaseolus mungo. | Udid (Black Gram) Phaseolus radiatus. | Math (Kidney Bean), Phaseolus aconitifolius | Vál (large fruited Dolichos), Dolichos lablab. | Chavli (small fruited Dolichos), Dolichos catiang. | Kulith (Horse Gram), Dolichos uniflorus. | Field Pea (Váttáne) Pisum sativum. | Lentil (Masur), Ervum lens. | Chickling Vetch (Lákh Láng), Lathyrus sativus. | Field Vetch (Guvár), Cyamopsis psoralioides. | Others. | Total II. | III.—Orchard and Garden Produce. A.—Vegetables (Roots and Tubers). | B.—Green Vegetables. | C.—Green Fodder. | D.—Fruit Trees. | Total III. | IV.—Drugs and Narcotics. Tobacco (Tambákhu) Nicotiana tabacum. | Bháng, Gánja, (Indian Hemp), Cannabis sativa | Opium (Áfu), Papaver somniferum. | Coffee (Káfi) Bund), Coffee Arabica. | Tea (Chaha), Tea sinensis. | Cinchona officinalis. | Others. | Total IV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | | Acres. |
| 1 | Ahmadabad ... | Rayatwári ... | 2,236 | 17,539 | 3,924 | 1,683 | 25,845 | 18 | 311 | 151 | ... | ... | ... | 3,470 | ... | 55,177 | 638 | 2,151 | 464 | 898 | 4,151 | 1,791 | ... | ... | .. | ... | ... | ... | 1,791 |
| | | Other Government | 181 | 11,112 | 8,951 | 5,511 | 18,830 | 73 | 508 | 8,103 | ... | ... | ... | 3,365 | ... | 56,634 | 334 | 717 | 3,699 | 99 | 4,849 | 250 | ... | ... | ... | ... | ... | ... | 250 |
| | | Alienated ... | 2 | 602 | 37 | 46 | 718 | ... | ... | 580 | ... | ... | ... | 172 | ... | 2,157 | 5 | 51 | 211 | 7 | 274 | 10 | ... | ... | ... | ... | ... | ... | 10 |
| | | Total ... | 2,419 | 29,253 | 12,912 | 7,240 | 45,393 | 91 | 819 | 8,834 | ... | ... | ... | 7,007 | ... | 113,968 | 977 | 2,919 | 4,374 | 1,004 | 9,274 | 2,051 | ... | ... | ... | ... | ... | ... | 2,051 |
| 2 | Kaira ... | Rayatwári ... | 11,906 | 21,019 | 3,412 | 1,474 | 22,541 | 534 | 4,024 | ... | 1 | ... | 1 | 8,614 | ... | 73,526 | 400 | 758 | 3,896 | 166 | 5,220 | 7,947 | ... | ... | ... | ... | ... | ... | 7,947 |
| | | Other Government... | 7,575 | 3,813 | 591 | 220 | 5,541 | 252 | 282 | ... | ... | ... | ... | 3,482 | ... | 21,756 | 152 | 251 | 861 | 51 | 1,315 | 10,095 | ... | ... | ... | ... | ... | ... | 10,095 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 19,481 | 24,832 | 4,003 | 1,694 | 28,082 | 786 | 4,306 | ... | 1 | ... | 1 | 12,096 | ... | 95,282 | 552 | 1,009 | 4,757 | 217 | 6,535 | 18,042 | ... | ... | ... | ... | ... | ... | 18,042 |
| 3 | Panch Mahals | Rayatwári ... | 2,956 | 48,233 | 2,261 | 6,717 | 1,727 | 44 | 274 | 209 | 725 | ... | ... | 752 | ... | 63,898 | 144 | 157 | 573 | 22 | 896 | 439 | ... | ... | ... | ... | ... | ... | 439 |
| | | Other Government... | 1,388 | 4,722 | 821 | 1,876 | 914 | 54 | 383 | ... | 943 | ... | ... | 209 | ... | 11,310 | 175 | 47 | 45 | 2 | 260 | 188 | ... | .. | ... | ... | ... | ... | 188 |
| | | Alienated ... | 789 | 5,208 | 416 | 630 | 606 | 4 | 86 | 5 | 97 | ... | ... | 161 | ... | 8,002 | 70 | 2 | ... | ... | 72 | 45 | ... | ... | ... | ... | ... | ... | 45 |
| | | Total ... | 5,133 | 58,163 | 3,498 | 9,223 | 3,247 | 102 | 743 | 214 | 1,765 | ... | ... | 1,122 | ... | 83,210 | 389 | 206 | 618 | 24 | 1,237 | 672 | ... | ... | ... | ... | ... | ... | 672 |
| 4 | Broach ... | Rayatwári ... | 11,631 | 2,831 | 390 | 19 | 3,580 | 908 | 290 | ... | 1,987 | ... | 48,046 | 339 | 6 | 70,027 | 229 | 1,170 | 16,273 | 398 | 18,070 | 2,900 | 1 | ... | ... | ... | ... | ... | 2,901 |
| | | Other Government... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 146 | ... | ... | 148 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... |
| | | Total ... | 11,633 | 2,831 | 390 | 19 | 3,580 | 908 | 290 | ... | 1,987 | ... | 48,192 | 339 | 6 | 70,175 | 229 | 1,170 | 16,273 | 398 | 18,070 | 2,900 | 1 | ... | ... | ... | ... | ... | 2,901 |
| 5 | Surat ... | Rayatwári ... | 24,561 | 2,272 | 3,511 | 3,969 | 332 | 53,188 | 904 | ... | 4,440 | 2 | 4,628 | 1,907 | ... | 99,714 | 396 | 1,979 | ... | 563 | 2,938 | 492 | 17 | ... | ... | 1 | ... | ... | 510 |
| | | Other Government... | 243 | 11 | 61 | 28 | 2 | 503 | 17 | ... | 38 | ... | 43 | 16 | ... | 962 | ... | 9 | ... | 1 | 10 | 3 | ... | ... | ... | ... | ... | ... | 3 |
| | | Alienated ... | 36 | 2 | 12 | 17 | ... | 33 | 2 | ... | 3 | ... | 18 | 2 | ... | 125 | 1 | 7 | ... | 3 | 11 | 7 | ... | ... | ... | ... | ... | ... | 7 |
| | | Total ... | 24,840 | 2,285 | 3,584 | 4,014 | 334 | 53,724 | 923 | ... | 4,481 | 2 | 4,689 | 1,925 | ... | 100,801 | 397 | 1,995 | ... | 567 | 2,959 | 502 | 17 | ... | ... | 1 | ... | ... | 520 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 68,042 | 49,280 | 10,603 | 31,177 | 15,895 | 252 | 1,465 | 82,927 | 2,768 | 566 | 164 | ... | ... | 263,139 | 1 679 | 3,242 | 45 | 2,592 | 7,558 | 3,573 | 10 | ... | ... | ... | ... | ... | 3,583 |
| | | Other Government... | 4,070 | 4,921 | 26 | 969 | 104 | ... | ... | 285 | 26 | 53 | ... | ... | ... | 10,454 | 1 | 6 | ... | 3 | 10 | 3 | ... | ... | ... | ... | ... | ... | 3 |
| | | Alienated ... | 2,507 | 1,925 | 124 | 1,308 | 225 | 22 | 28 | 480 | 34 | 43 | ... | ... | ... | 6,696 | 137 | 91 | ... | 346 | 574 | 184 | ... | ... | ... | ... | ... | ... | 184 |
| | | Total ... | 74,619 | 56,126 | 10,753 | 33,454 | 16,224 | 274 | 1,493 | 83,692 | 2,828 | 662 | 164 | ... | ... | 280,289 | 1,817 | 3,339 | 45 | 2,941 | 8,142 | 3,760 | 10 | ... | ... | ... | ... | ... | 3,770 |
| 7 | Násik ... | Rayatwári ... | 29,945 | 86,753 | 11,216 | 31,092 | 13,175 | 20 | 148 | 84,393 | 2,938 | 8,546 | 4,198 | ... | ... | 272,418 | 3,004 | 3,281 | 1,421 | 1,769 | 9,475 | 1,001 | 26 | ... | ... | ... | ... | ... | 1,027 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 2,860 | 7,194 | 265 | 1,687 | 240 | ... | ... | 2,963 | 160 | 735 | 482 | ... | ... | 16,586 | 532 | 381 | 30 | 147 | 1,090 | 71 | 1 | ... | ... | ... | ... | ... | 72 |
| | | Total ... | 32,805 | 93,947 | 11,481 | 32,779 | 13,415 | 20 | 148 | 87,356 | 3,098 | 9,281 | 4,674 | .. | ... | 289,004 | 3,536 | 3,662 | 1,451 | 1,916 | 10,565 | 1,072 | 27 | ... | ... | ... | ... | ... | 1,099 |
| 8 | Ahmadnagar ... | Rayatwári ... | 77,033 | 112,094 | 32,050 | 8,846 | 50,017 | 694 | 447 | 72,157 | 1,484 | 547 | 139 | ... | 130 | 355,638 | 1,655 | 955 | 2,204 | 1,426 | 6,240 | 3,015 | 347 | ... | ... | ... | ... | ... | 3,362 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 12,689 | 15,412 | 2,648 | 8 | 8,710 | 5 | 3 | 9,023 | ... | ... | ... | ... | 6 | 48,504 | 110 | 98 | 401 | 182 | 791 | 252 | 35 | ... | ... | ... | ... | ... | 287 |
| | | Total ... | 89,722 | 127,506 | 34,698 | 8,854 | 58,727 | 699 | 450 | 81,180 | 1,484 | 547 | 139 | ... | 136 | 404,142 | 1,765 | 1,053 | 2,605 | 1,608 | 7,031 | 3,267 | 382 | ... | ... | ... | ... | ... | 3,649 |
| 9 | Poona ... | Rayatwári ... | 40,018 | 63,908 | 7,799 | 5,545 | 42,784 | 3,676 | 191 | 40,961 | 1,904 | 1,632 | 2 | ... | ... | 208,420 | 8,647 | 1,699 | 1,563 | 3,111 | 15,020 | 927 | 10 | ... | ... | ... | ... | ... | 937 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 8,654 | 14,296 | 741 | 1,470 | 6,161 | 382 | 10 | 8,160 | 346 | 99 | ... | ... | ... | 40,319 | 1,603 | 464 | 252 | 799 | 3,118 | 33 | 5 | ... | ... | ... | ... | ... | 38 |
| | | Total ... | 48,672 | 78,204 | 8,540 | 7,015 | 48,945 | 4,058 | 201 | 49,121 | 2,250 | 1,731 | 2 | ... | ... | 248,739 | 10,250 | 2,163 | 1,815 | 3,910 | 18,138 | 960 | 15 | ... | ... | ... | ... | ... | 975 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... ... | 107,293 | 66,664 | 12,404 | 1,065 | 70,950 | 105 | 28 | 26,530 | 51 | 88 | 396 | ... | ... | 284 | 2,753 | 1,489 | 1,252 | 1,393 | 6,887 | 1,802 | 48 | ... | ... | ... | ... | ... | 1,850 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 5,044 | 4,715 | 508 | 42 | 5,320 | 1 | ... | 2,696 | 1 | 1 | 21 | ... | ... | 9 | 204 | 153 | 111 | 34 | 502 | 103 | ... | ... | ... | ... | ... | ... | 103 |
| | | Total ... | 112,337 | 71,379 | 12,912 | 1,107 | 76,270 | 106 | 28 | 29,226 | 52 | 89 | 417 | ... | ... | 303,923 | 2,957 | 1,642 | 1,363 | 1,427 | 7,389 | 1,905 | 48 | ... | ... | ... | ... | ... | 1,953 |
| 11 | Sátára... ... | Rayatwári ... ... | 63,781 | 65,238 | 14,888 | 33,382 | 75,483 | 3,773 | 321 | 45,106 | 1,249 | 591 | 18 | ... | 8 | 303,38 | 5,121 | 1,006 | 1,101 | 1,041 | 8,269 | 6,684 | 298 | ... | 14 | ... | ... | ... | 6,996 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 10,384 | 9,919 | 2,296 | 7,870 | 6,566 | 597 | 40 | 6,275 | 364 | 136 | ... | ... | ... | 44,447 | 912 | 185 | 177 | 184 | 1,458 | 567 | 1 | ... | ... | ... | ... | ... | 568 |
| | | Total ... | 74,165 | 75,157 | 17,184 | 41,252 | 82,049 | 4,370 | 361 | 51,381 | 1,613 | 727 | 18 | ... | 8 | 348,285 | 6,033 | 1,191 | 1,278 | 1,225 | 9,727 | 7,251 | 299 | ... | 14 | ... | ... | ... | 7,564 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... ... | 68,374 | 36,114 | 11,805 | 5,792 | 7,330 | 7,301 | 1,099 | 50,142 | 5,900 | 5,515 | ... | ... | ... | 199,372 | 3,494 | 2,185 | 244 | 2,001 | 7,924 | 17,834 | ... | ... | 36 | ... | ... | ... | 17,870 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 19,784 | 8,116 | 4,631 | 937 | 2,320 | 815 | 163 | 12,356 | 299 | 336 | ... | ... | ... | 49,757 | 1,158 | 348 | 218 | 441 | 2,165 | 4,086 | ... | ... | ... | ... | ... | ... | 4,086 |
| | | Total ... | 88,158 | 44,230 | 16,436 | 6,729 | 9,650 | 8,116 | 1,262 | 62,498 | 6,199 | 5,851 | ... | ... | ... | 249,129 | 4,652 | 2,533 | 462 | 2,442 | 10,089 | 21,920 | ... | ... | 36 | ... | ... | ... | 21,956 |
| 13 | Bijápur ... | Rayatwári ... ... | 129,824 | 42,699 | 39,439 | 3 | 10,473 | 4,892 | 3,816 | 31,406 | 72 | ... | ... | ... | ... | 262,624 | 1,659 | 1,323 | 779 | 2,034 | 5,795 | 2,095 | 13 | ... | ... | ... | ... | ... | 2,108 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 16,798 | 3,602 | 4,980 | 3 | 853 | 598 | 584 | 4,740 | 2 | ... | ... | ... | ... | 32,160 | 224 | 156 | 106 | 259 | 745 | 159 | ... | ... | ... | ... | ... | ... | 159 |
| | | Total ... | 146,622 | 46,301 | 44,419 | 6 | 11,326 | 5,490 | 4,400 | 36,146 | 74 | ... | ... | ... | ... | 294,784 | 1,883 | 1,479 | 885 | 2,293 | 6,540 | 2,254 | 13 | ... | ... | ... | ... | ... | 2,267 |
| 14 | Dhárwár ... | Rayatwári ... ... | 64,750 | 44,971 | 50,182 | 6,900 | 13,649 | 6,380 | 837 | 48,265 | 422 | 38 | ... | ... | ... | 236,394 | 1,707 | 3,688 | 16 | 3,646 | 9,057 | 994 | ... | ... | ... | ... | ... | ... | 994 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 4,210 | 1,540 | 3,203 | 237 | 610 | 522 | 36 | 3,356 | 64 | 9 | ... | ... | ... | 13,787 | 99 | 353 | 8 | 389 | 849 | 39 | ... | ... | ... | ... | ... | ... | 39 |
| | | Total ... | 68,960 | 46,511 | 53,385 | 7,137 | 14,259 | 6,902 | 873 | 51,621 | 486 | 47 | ... | ... | ... | 250,181 | 1,806 | 4,041 | 24 | 4,035 | 9,906 | 1,033 | ... | ... | ... | ... | ... | ... | 1,033 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána... ... | Rayatwári ... ... | 6,222 | 2,429 | 385 | 18,740 | ... | 2,958 | 4,098 | 1,098 | 256 | ... | 225 | ... | ... | 36,411 | 954 | 910 | 130 | 3,412 | 5,406 | 6 | ... | ... | ... | ... | ... | ... | 6 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | ... | 129 | 137 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 66 | ... | ... | 52 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 118 | 18 | 32 | ... | 201 | 251 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 6,288 | 2,429 | 385 | 18,792 | ... | 2,958 | 4,098 | 1,098 | 256 | ... | 225 | ... | ... | 36,529 | 972 | 950 | 130 | 3,742 | 5,794 | 6 | ... | ... | ... | ... | ... | ... | 6 |
| 16 | Kolába ... | Rayatwári ... ... | 871 | 2,441 | 940 | 2,981 | ... | 5,907 | 32 | 44 | ... | ... | ... | ... | ... | 13,216 | 86 | 369 | ... | 2,063 | 2,518 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Other Government... | 1,441 | 340 | 1,594 | 5,885 | ... | 2,637 | 30 | 54 | ... | ... | ... | ... | ... | 11,983 | 9 | 115 | ... | 2 | 126 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | ... | 21 | ... | 13 | ... | 30 | ... | ... | ... | ... | ... | ... | ... | 64 | ... | 2 | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 2,312 | 2,802 | 2,534 | 8,879 | ... | 8,574 | 62 | 98 | ... | ... | ... | ... | ... | 25,261 | 95 | 486 | ... | 2,065 | 2,646 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17 | Ratnágiri ... | Rayatwári ... ... | 226 | 47 | 319 | 1,955 | ... | 1,104 | 57 | 7,606 | ... | ... | ... | ... | 388 | 11,702 | 45 | 45 | ... | 5,460 | 5,550 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| | | Other Government... | 182 | ... | 14 | 348 | ... | 251 | 43 | 1,154 | ... | ... | ... | ... | 13 | 2,005 | ... | 4 | ... | 253 | 257 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | 9 | ... | 2 | 73 | ... | ... | 1 | 312 | ... | ... | ... | ... | ... | 397 | ... | ... | ... | 162 | 162 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 417 | 47 | 335 | 2,376 | ... | 1,355 | 101 | 9,072 | ... | ... | ... | ... | 401 | 14,104 | 45 | 49 | ... | 5,875 | 5,969 | 1 | ... | ... | ... | ... | ... | ... | 1 |
| 18 | Kánara ... | Rayatwári ... ... | 211 | 351 | 1,384 | 1,829 | ... | 98 | 1,136 | 1,974 | 316 | 1 | ... | ... | 3 | 7,303 | 258 | 602 | 1,330 | 17,994 | 20,184 | ... | ... | ... | 16 | ... | ... | 5 | 21 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 211 | 351 | 1,384 | 1,829 | ... | 98 | 1,136 | 1,974 | 316 | 1 | ... | ... | 3 | 7,303 | 258 | 602 | 1,330 | 17,994 | 20,184 | ... | ... | ... | 16 | ... | ... | 5 | 21 |
| | Total, A ... | Rayatwári ... ... | 709,880 | 664,883 | 206,912 | 163,169 | 353,781 | 91,852 | 19,478 | 492,969 | 24,513 | 17,526 | 57,811 | 15,082 | 535 | 2,818,391 | 32,869 | 27,009 | 31,291 | 49,989 | 141,158 | 51,501 | 770 | ... | 66 | 1 | ... | 5 | 52,343 |
| | | Other Government... | 15,082 | 24,919 | 12,058 | 14,837 | 25,391 | 3,770 | 1,263 | 9,596 | 1,007 | 53 | 189 | 7,072 | 13 | 115,256 | 671 | 1,157 | 4,605 | 540 | 6,973 | 10,539 | ... | ... | ... | ... | ... | ... | 10,539 |
| | | Alienated ... ... | 83,832 | 72,552 | 19,863 | 14,393 | 32,329 | 3,009 | 953 | 50,946 | 1,370 | 1,359 | 521 | 335 | 6 | 281,468 | 5,075 | 2,323 | 1,514 | 3,154 | 12,064 | 5,556 | 42 | ... | ... | ... | ... | ... | 5,598 |
| | | Total ... | 808,794 | 762,354 | 238,833 | 192,399 | 411,501 | 98,631 | 21,694 | 553 511 | 26,890 | 18,938 | 58,521 | 22,489 | 554 | 3,215,109 | 38,613 | 30,489 | 37,410 | 53,683 | 160,195 | 67,596 | 812 | ... | 66 | 1 | ... | 5 | 68,480 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... ... ... ... | | ... | 3,731 | 13,110 | 2,086 | 2,844 | ... | 42 | ... | ... | ... | 9,606 | 59 | ... | 31,478 | 1,516 | 2,659 | 1,828 | 2,272 | 8,275 | 241 | 65 | ... | ... | ... | ... | 1 | 307 |
| 20 | Hyderabad ... ... .. | | ... | 4,230 | 2,245 | 10 | 85 | ... | 877 | ... | ... | ... | 17,952 | ... | 1 | 25,400 | 2,148 | 4,508 | 15,324 | 4,619 | 26,599 | 5,681 | 3 | ... | ... | ... | ... | 11 | 5,695 |
| 21 | Shikárpur... ... ... ... | | ... | 27,046 | 889 | 1,029 | ... | ... | 8 | ... | ... | ... | 101,115 | 1 | 60 | 130,148 | 2,183 | 6,037 | 2,024 | 3,919 | 14,163 | 3,813 | 236 | ... | ... | ... | ... | 6 | 4,055 |
| 22 | Upper Sind Frontier ... ... | | ... | 4,220 | 1,376 | 195 | 36 | ... | 192 | ... | ... | ... | 9,104 | ... | 126 | 15,249 | 110 | 924 | 2 | 74 | 1,110 | 95 | ... | ... | ... | ... | ... | ... | 95 |
| 23 | Thar and Párkar... ... ... | | 18 | ... | 7,334 | ... | ... | ... | 585 | ... | ... | ... | 3 | 329 | ... | 8,269 | 192 | 10,049 | 4,362 | 242 | 14,845 | 196 | ... | ... | ... | ... | ... | ... | 196 |
| | | Total, B ... | 18 | 39,227 | 24,954 | 3,320 | 2,965 | ... | 1,704 | ... | ... | ... | 137,780 | 389 | 187 | 210,544 | 6,149 | 24,177 | 23,540 | 11,126 | 64,992 | 10,026 | 304 | ... | ... | ... | ... | 18 | 10,348 |
| | | Grand Total ... | 808,812 | 801,581 | 263,787 | 195,719 | 414,466 | 98,631 | 23,398 | 553,511 | 26,890 | 18,938 | 196,301 | 22,878 | 741 | 3,425,653 | 44,762 | 54,666 | 60,950 | 64,809 | 225,187 | 77,622 | 1,116 | ... | 66 | 1 | ... | 23 | 78,828 |

# III.—Crops, 1892-93—*continued.*

| No. | District. | | V.—Condiments and Spices. Cardamom (Veldode) Elettaria cardamomum. | Chillies (Mirchya), Capsicum frutescens. | Ginger (Ale), Zingiber officinale. | Black Pepper (Miri) Piper nigrum. | Betel-leaves (Páne), Piper-betel. | Betel-nut (Supári), Areca-catechu. | Turmeric (Halad), Curcuma longa. | Fennel (Badi-shep), Pimpinella anisum. | Dill-seed (Bilant-shep), Anethum sowa. | Coriander (Dhane), Coriandrum sativum. | Cumin (Jire), Cuminum cyminum. | Ajwan-seed (Ova), Ptychotis ajowan. | Fenugreek (Methi), Trigonella fœnumgræcum. | Common Mustard (Rái), Sinapis Indica. | Garlic (Lasun), Allium sativum. | Others. | Total V. | VI.—Starches. Arrowroot Maranta arundinacea, Curcuma angustifolia, &c. | Others. | Total VI. | VII.—Sugar. Sugarcane (Us, Sherdi), Saccharum officinarum. | Others. | Total VII. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | | | | | | | | Acres. | | | Acres. | | | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad | Rayatwári | ... | 1,210 | 257 | ... | ... | ... | ... | 229 | 21 | 1 | 7 | ... | 650 | 6 | 43 | 18 | 2,442 | ... | ... | ... | 2,118 | ... | 2,118 |
| | | Other Government | ... | 117 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 57 | ... | 10 | ... | 184 | ... | ... | ... | 815 | ... | 815 |
| | | Alienated | ... | 28 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 30 | ... | ... | ... | 28 | ... | 28 |
| | | Total | ... | 1,355 | 257 | ... | ... | ... | ... | 231 | 21 | 1 | 7 | ... | 707 | 6 | 53 | 18 | 2,656 | ... | ... | ... | 2,961 | ... | 2,961 |
| 2 | Kaira | Rayatwári | ... | 649 | 141 | ... | ... | ... | 17 | 265 | 2 | 2 | 335 | ... | 93 | 25 | 36 | 159 | 1,724 | ... | ... | ... | 525 | ... | 525 |
| | | Other Government | ... | 271 | 55 | ... | ... | ... | 4 | 1 | 1 | ... | 817 | ... | 6 | ... | 72 | 61 | 1,288 | ... | ... | ... | 396 | ... | 396 |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 920 | 196 | ... | ... | ... | 21 | 266 | 3 | 2 | 1,152 | ... | 99 | 25 | 108 | 220 | 3,012 | ... | ... | ... | 921 | ... | 921 |
| 3 | Panch Mahâls | Rayatwári | ... | 423 | 9 | ... | ... | ... | 2 | 2 | 3 | ... | 10 | ... | 32 | 29 | 27 | ... | 537 | ... | ... | ... | 218 | ... | 218 |
| | | Other Government | ... | 162 | 1 | ... | ... | ... | ... | ... | ... | 11 | ... | ... | 31 | ... | 46 | ... | 251 | ... | ... | ... | 18 | ... | 18 |
| | | Alienated | ... | 66 | 2 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | 2 | ... | 72 | ... | ... | ... | 15 | ... | 15 |
| | | Total | ... | 651 | 12 | ... | ... | ... | 2 | 2 | 3 | 12 | 10 | ... | 64 | 29 | 75 | ... | 860 | ... | ... | ... | 251 | ... | 251 |
| 4 | Broach | Rayatwári | ... | 172 | 11 | ... | ... | ... | 14 | ... | 8 | 26 | ... | ... | 5 | 11 | 36 | 2 | 285 | ... | ... | ... | 97 | ... | 97 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ... |
| | | Alienated | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Total | ... | 172 | 11 | ... | ... | ... | 14 | ... | 8 | 26 | ... | ... | 5 | 11 | 36 | 2 | 285 | ... | ... | ... | 97 | ... | 97 |
| 5 | Surat | Rayatwári | ... | 556 | 132 | ... | ... | ... | 133 | ... | 2 | 10 | ... | 23 | 236 | 7 | 116 | 23 | 1,238 | ... | ... | ... | 5,447 | ... | 5,447 |
| | | Other Government | ... | 27 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 27 | ... | ... | ... | 80 | ... | 80 |
| | | Alienated | ... | 36 | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 40 | ... | ... | ... | 10 | ... | 10 |
| | | Total | ... | 619 | 136 | ... | ... | ... | 133 | ... | 2 | 10 | ... | 23 | 236 | 7 | 116 | 23 | 1,305 | ... | ... | ... | 5,537 | ... | 5,537 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh | Rayatwári | ... | 8,269 | 6 | ... | 219 | ... | 55 | 455 | 674 | 10,119 | ... | 528 | 406 | 387 | 193 | ... | 21,311 | ... | ... | ... | 2,361 | ... | 2,361 |
| | | Other Government | ... | 7 | ... | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | 3 | ... | ... | 13 | ... | ... | ... | 1 | ... | 1 |
| | | Alienated | ... | 133 | ... | ... | 14 | ... | 11 | 16 | 74 | 53 | ... | 4 | 14 | 18 | 4 | ... | 341 | ... | ... | ... | 54 | ... | 54 |
| | | Total | ... | 8,409 | 6 | ... | 233 | ... | 66 | 474 | 748 | 10,172 | ... | 532 | 420 | 408 | 197 | ... | 21,665 | ... | ... | ... | 2,416 | ... | 2,416 |
| 7 | Násik | Rayatwári | ... | 3,636 | 7 | ... | 128 | 1 | 212 | ... | 5 | 5 | ... | 1 | 2,141 | 23 | 569 | 4 | 6,732 | ... | 13 | 13 | 7,469 | ... | 7,469 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 323 | 1 | ... | 41 | ... | ... | ... | ... | ... | ... | ... | 442 | 44 | 37 | ... | 898 | ... | ... | ... | 833 | ... | 833 |
| | | Total | ... | 3,959 | 8 | ... | 169 | 1 | 212 | ... | 5 | 5 | ... | 1 | 2,583 | 67 | 606 | 4 | 7,620 | ... | 13 | 13 | 8,302 | ... | 8,302 |
| 8 | Ahmadnagar | Rayatwári | ... | 4,775 | ... | ... | 402 | ... | 1 | ... | 3 | 1 | ... | 1 | 4 | 9 | 104 | ... | 5,300 | ... | ... | ... | 3,074 | ... | 3,074 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 502 | ... | ... | 22 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 14 | ... | 539 | ... | 10 | 10 | 249 | ... | 249 |
| | | Total | ... | 5,277 | ... | ... | 424 | 1 | 1 | ... | 3 | 1 | ... | 1 | 4 | 9 | 118 | ... | 5,839 | ... | 10 | 10 | 3,323 | ... | 3,323 |
| 9 | Poona | Rayatwári | ... | 6,874 | 5 | 5 | 397 | 1 | 49 | 32 | ... | 404 | ... | 5 | 44 | 100 | 531 | ... | 8,447 | ... | ... | ... | 7,515 | ... | 7,515 |
| | | Other Government | ... | ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ..... | ... | ... |
| | | Alienated | ... | 1,480 | ... | ... | 368 | ... | 3 | ... | ... | 3 | ... | ... | 11 | ... | 108 | ... | 1,973 | ... | ... | ... | 1,175 | ... | 1,175 |
| | | Total | ... | 8,354 | 5 | 5 | 765 | 1 | 52 | 32 | ... | 407 | ... | 5 | 55 | 100 | 639 | ... | 10,420 | ... | ... | ... | 8,690 | ... | 8,690 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... | ... | 8,118 | ... | ... | 343 | ... | 736 | ... | ... | 79 | ... | 17 | 10 | ... | 196 | ... | 9,499 | ... | ... | ... | 3,776 | ... | 3,776 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 490 | ... | ... | ... | 1 | 1 | ... | ... | 5 | ... | ... | ... | ... | 3 | ... | 500 | ... | ... | ... | 210 | ... | 210 |
| | | Total ... | ... | 8,608 | ... | ... | 343 | 1 | 737 | ... | ... | 84 | ... | 17 | 10 | ... | 199 | ... | 9,999 | ... | ... | ... | 3,986 | ... | 3,986 |
| 11 | Sátára ... | Rayatwári ... | ... | 11,061 | 52 | ... | 361 | 3 | 2,387 | 169 | ... | 381 | ... | 31 | 76 | ... | 661 | ... | 15,182 | ... | ... | ... | 10,585 | ... | 10,585 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 1,763 | 32 | 1 | 50 | ... | 401 | 44 | ... | 175 | ... | 1 | ... | ... | 74 | ... | 2,541 | ... | ... | ... | 2,174 | ... | 2,174 |
| | | Total ... | ... | 12,824 | 84 | 1 | 411 | 3 | 2,788 | 213 | ... | 556 | ... | 32 | 76 | ... | 735 | ... | 17,723 | ... | ... | ... | 12,759 | ... | 12,759 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum .. | Rayatwári ... | ... | 13,691 | ... | ... | 105 | 6 | 176 | 77 | ... | 482 | ... | ... | 143 | 90 | 1,453 | ... | 16,223 | ... | ... | ... | 7,476 | ... | 7,476 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 3,201 | ... | ... | 100 | 1 | 54 | 26 | 1 | 453 | ... | ... | 21 | 6 | 292 | ... | 4,155 | ... | ... | ... | 2,339 | ... | 2,339 |
| | | Total ... | ... | 16,892 | ... | ... | 205 | 7 | 230 | 103 | 1 | 935 | ... | ... | 164 | 96 | 1,745 | ... | 20,378 | ... | ... | ... | 9,815 | ... | 9,815 |
| 13 | Bijápur ... | Rayatwári ... | ... | 3,930 | ... | ... | 50 | 1 | 6 | 1 | 1 | 15 | ... | ... | 1 | 2 | 156 | ... | 4,163 | ... | ... | ... | 1,121 | ... | 1,121 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 452 | ... | ... | 2 | ... | ... | ... | ... | 2 | ... | ... | 1 | ... | 13 | ... | 470 | ... | ... | ... | 134 | ... | 134 |
| | | Total ... | ... | 4,382 | ... | ... | 52 | 1 | 6 | 1 | 1 | 17 | ... | ... | 2 | 2 | 169 | ... | 4,633 | ... | ... | ... | 1,255 | ... | 1,255 |
| 14 | Dhárwár ... | Rayatwári ... | ... | 50,034 | 4 | ... | 1,267 | 516 | 32 | 1 | 2 | 463 | ... | 22 | 35 | 123 | 1,083 | ... | 53,612 | ... | ... | ... | 2,503 | ... | 2,503 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | 1,803 | ... | ... | 58 | 53 | ... | ... | ... | 2 | ... | ... | ... | 5 | ... | ... | 1,926 | ... | ... | ... | 306 | ... | 306 |
| | | Total ... | ... | 51,872 | 4 | ... | 1,325 | 569 | 32 | 1 | 2 | 465 | ... | 22 | 35 | 128 | 1,083 | ... | 55,538 | ... | ... | ... | 2,809 | ... | 2,809 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | ... | 264 | 246 | ... | 202 | 6 | 37 | ... | ... | 623 | ... | ... | ... | ... | 3 | ... | 1,381 | ... | ... | ... | 1,341 | ... | 1,341 |
| | | Other Government | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | ... | 264 | 246 | ... | 202 | 6 | 37 | ... | ... | 623 | ... | ... | ... | ... | 3 | ... | 1,381 | ... | ... | ... | 1,341 | ... | 1,341 |
| 16 | Kolába ... | Rayatwári ... | ... | 66 | ... | ... | 16 | 490 | ... | ... | ... | 241 | ... | ... | ... | ... | ... | ... | 813 | ... | ... | ... | 30 | ... | 30 |
| | | Other Government... | ... | 51 | ... | ... | ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 55 | ... | ... | ... | 10 | ... | 10 |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | ... | 117 | ... | ... | 16 | 494 | ... | ... | ... | 241 | ... | ... | ... | ... | ... | ... | 868 | ... | ... | ... | 40 | ... | 40 |
| 17 | Ratnágiri ... | Rayatwári ... | ... | 547 | ... | ... | ... | 464 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,013 | ... | ... | ... | 181 | ... | 181 |
| | | Other Government | ... | 30 | ... | ... | ... | 268 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 298 | ... | ... | ... | 12 | ... | 12 |
| | | Alienated ... | ... | 18 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 20 | ... | ... | ... | 20 | ... | 20 |
| | | Total ... | ... | 595 | ... | ... | ... | 734 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,331 | ... | ... | ... | 213 | ... | 213 |
| 18 | Kánara ... | Rayatwári ... | ... | 1,149 | 254 | 3 | 1,938 | 267 | 11,476 | 48 | ... | ... | 3 | ... | ... | ... | 1 | 5 | 233 | 15,377 | ... | ... | ... | 3,327 | ... | 3,327 |
| | | Other Government... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | ... | 1,149 | 254 | 3 | 1,938 | 267 | 11,476 | 48 | ... | ... | 3 | ... | ... | ... | 1 | 5 | 233 | 15,377 | ... | ... | ... | 3,327 | ... | 3,327 |
| | Total, A ... | Rayatwári ... | ... | 1,149 | 114,559 | 873 | 1,943 | 3,757 | 12,964 | 3,907 | 1,231 | 721 | 12,855 | 352 | 628 | 3,876 | 813 | 5,212 | 439 | 165,279 | ... | 13 | 13 | 59,164 | ... | 59,164 |
| | | Other Government | ... | ... | 665 | 56 | ... | ... | 272 | 4 | 4 | 1 | 11 | 817 | ... | 94 | 3 | 128 | 61 | 2,116 | ... | ... | ... | 1,332 | ... | 1,332 |
| | | Alienated ... | ... | ... | 10,300 | 39 | 1 | 655 | 58 | 470 | 88 | 75 | 694 | ... | 5 | 490 | 73 | 547 | ... | 13,495 | ... | 10 | 10 | 7,547 | ... | 7,547 |
| | | Total ... | ... | 1,149 | 125,524 | 968 | 1,944 | 4,412 | 13,294 | 4,381 | 1,323 | 797 | 13,560 | 1,169 | 633 | 4,460 | 889 | 5,887 | 500 | 180,890 | ... | 23 | 23 | 68,043 | ... | 68,043 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | ... | ... | 43 | ... | ... | ... | ... | 1 | 15 | ... | 253 | 100 | 1 | ... | 2,302 | 34 | ... | 2,749 | ... | 8 | 8 | 1,284 | ... | 1,284 |
| 20 | Hyderabad ... | | ... | ... | 211 | ... | ... | ... | ... | ... | 2 | 5 | 44 | 10 | ... | ... | 661 | 87 | ... | 1,020 | ... | 28 | 28 | 1,208 | ... | 1,208 |
| 21 | Shikárpur ... | | ... | ... | 113 | ... | ... | ... | ... | ... | 6 | ... | 1,813 | 53 | ... | ... | 34 | 93 | 18 | 2,130 | ... | 12 | 12 | 599 | ... | 599 |
| 22 | Upper Sind Frontier | | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | 175 | ... | ... | ... | ... | 2 | ... | 179 | ... | ... | ... | 7 | ... | 7 |
| 23 | Thar and Párkar ... | | ... | ... | 51 | ... | ... | ... | ... | ... | ... | 3 | 29 | ... | ... | ... | ... | 11 | 1 | 95 | ... | 5 | 5 | 21 | ... | 21 |
| | Total, B ... | | | ... | 419 | ... | ... | ... | ... | 1 | 23 | 9 | 2,314 | 163 | 1 | ... | 2,997 | 227 | 19 | 6,173 | ... | 53 | 53 | 3,119 | ... | 3,119 |
| | GRAND TOTAL ... | | | 1,149 | 125,943 | 968 | 1,944 | 4,412 | 13,294 | 4,382 | 1,346 | 806 | 15,874 | 1,332 | 634 | 4,460 | 3,886 | 6,114 | 519 | 187,063 | ... | 76 | 76 | 71,162 | ... | 71,162 |

# III.—Crops, 1892-93—*concluded.*

| No. | Districts. | | VIII—Oil Seeds. Sesame (Til), Sesamum Indicum. | Linseed (Alsi, Javas), Linum usitatissimum. | Castor-oil Seed (Eranda), Ricinus communis. | Safflower Seed (Kardai), Carthamus tinctorius. | Rape (Shiras), Brassica napus. | Niger-seed (Khurásni), Verbesina sativa. | Ground-nut (Bhuimug), Arachis hypogea. | Cocoanut (Khobáre), Cocus nucifera. | Others. | Total VIII. | IX.—Dyes. Indigo (Nil, Guli), Indigofera tinctoria. | Safflower (Kusumba), Carthamus Persicus. | Morinda (Al, Surangi), Morinda citrifolia. | Others. | Total IX. | X.—Fibres. Cotton (Kápus), Gossypium herbaceum. | Bombay Hemp (San, Tag), Crotolaria juncea. | Hemp (Ambádi, Shetia), Hibiscus cannabinus. | Jute. | Rhea. | Others. | Total X. | XI.—Miscellaneous. | Gross Area cropped. | Deduct Area cropped more than once. | Remainder Net Area cropped. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
| | A.—Bombay Presidency Proper. | | | | | | | | | | | Acres. | | | | | Acres. | | | | | | | Acres. | Acres. | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadabad. | Rayatwári | 14,876 | 2,846 | 7,722 | 110 | 2,427 | ... | ... | ... | ... | 27,981 | 202 | 366 | ... | ... | 568 | 78,065 | 445 | 47 | ... | ... | ... | 78,557 | 220 | 730,063 | 24,201 | 705,862 |
| | | Other Govt. | 8,436 | 541 | 2,098 | 311 | 528 | ... | ... | ... | ... | 11,914 | ... | ... | ... | ... | .. | 130,812 | 723 | 75 | ... | ... | ... | 131,610 | 20 | 638,368 | 3,887 | 634,481 |
| | | Alienated | 367 | ... | 271 | 1 | 12 | ... | ... | ... | ... | 651 | ... | ... | ... | ... | ... | 20,617 | ... | ... | ... | ... | ... | 20,617 | ... | 54,344 | 216 | 54,128 |
| | | Total | 23,679 | 3,387 | 10,091 | 422 | 2,967 | ... | ... | ... | ... | 40,546 | 202 | 366 | ... | ... | 568 | 229,494 | 1,168 | 122 | ... | ... | ... | 230,784 | 240 | 1,422,775 | 28,304 | 1,394,471 |
| 2 | Kaira | Rayatwári | 6,099 | 438 | 4,926 | 820 | 146 | ... | ... | ... | ... | 12,429 | 119 | 361 | ... | ... | 480 | 6,981 | 69 | 1,195 | ... | ... | ... | 8,245 | 38 | 588,395 | 36,331 | 552,064 |
| | | Other Govt. | 2,007 | ... | 429 | 60 | 52 | ... | ... | ... | ... | 2,548 | 183 | 180 | ... | ... | 363 | 4,123 | 11 | 752 | ... | ... | ... | 4,886 | 34 | 163,921 | 7,427 | 156,494 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total | 8,106 | 438 | 5,355 | 880 | 198 | ... | ... | ... | ... | 14,977 | 302 | 541 | ... | ... | 843 | 11,104 | 80 | 1,947 | ... | ... | ... | 13,131 | 72 | 752,316 | 43,758 | 708,558 |
| 3 | Panch Maháls. | Rayatwári | 17,030 | 321 | 2,562 | 1 | 1,325 | 487 | ... | ... | 8,690 | 30,476 | ... | 2 | ... | ... | 2 | 297 | 3,314 | 485 | ... | ... | ... | 4,096 | ... | 311,235 | 66,224 | 245,011 |
| | | Other Govt. | 1,408 | ... | 584 | ... | 58 | 71 | ... | ... | 2,386 | 4,507 | ... | ... | ... | ... | ... | 361 | 1,303 | 238 | ... | ... | ... | 1,902 | ... | 74,621 | 7,385 | 67,236 |
| | | Alienated | 1,073 | 13 | 301 | ... | 80 | 134 | ... | ... | 590 | 2,191 | ... | ... | ... | ... | ... | 34 | 368 | 56 | ... | ... | ... | 458 | ... | 42,533 | 6,928 | 35,605 |
| | | Total | 19,571 | 334 | 3,447 | 1 | 1,463 | 692 | ... | ... | 11,666 | 37,174 | ... | 2 | ... | ... | 2 | 692 | 4,985 | 779 | ... | ... | ... | 6,456 | ... | 428,389 | 80,537 | 347,852 |
| 4 | Broach | Rayatwári | 10,524 | ... | 1,532 | ... | ... | ... | ... | ... | ... | 12,056 | 899 | 71 | ... | ... | 970 | 224,761 | 45 | 2 | ... | ... | ... | 224,808 | 51 | 577,095 | 1,559 | 575,536 |
| | | Other Govt. | 9 | ... | 5 | ... | ... | ... | ... | ... | ... | 14 | ... | ... | ... | ... | ... | 511 | ... | ... | ... | ... | ... | 511 | ... | 841 | ... | 841 |
| | | Alienated | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Total | 10,533 | ... | 1,537 | ... | ... | ... | ... | ... | ... | 12,070 | 899 | 71 | ... | ... | 970 | 225,272 | 45 | 2 | ... | ... | ... | 225,319 | 51 | 577,936 | 1,559 | 576,377 |
| 5 | Surat | Rayatwári | 2,746 | ... | 31,081 | ... | 4 | 206 | 277 | 2 | ... | 34,316 | ... | 31 | ... | ... | 31 | 78,888 | 2,600 | 38 | ... | ... | ... | 81,526 | 94 | 552,906 | 68,642 | 484,264 |
| | | Other Govt. | 1 | ... | 307 | ... | ... | 1 | 10 | ... | ... | 319 | ... | ... | ... | ... | ... | 1,211 | 15 | ... | ... | ... | ... | 1,226 | ... | 5,971 | 662 | 5,309 |
| | | Alienated | 10 | ... | 88 | ... | ... | ... | 8 | ... | ... | 106 | ... | ... | ... | ... | ... | 210 | 4 | ... | ... | ... | ... | 214 | ... | 3,630 | 20 | 3,810 |
| | | Total | 2,757 | ... | 31,476 | ... | 4 | 207 | 295 | 2 | ... | 34,741 | ... | 31 | ... | ... | 31 | 80,309 | 2,619 | 38 | ... | ... | ... | 82,966 | 94 | 562,707 | 69,324 | 493,383 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh. | Rayatwári | 60,482 | 59,222 | 8,905 | 1,353 | ... | 6,092 | 4,682 | ... | ... | 140,736 | 829 | ... | 104 | ... | 933 | 1,045,673 | 2,010 | 7,691 | ... | ... | 1 | 1,055,375 | 51 | 2,952,317 | 27,712 | 2,924,605 |
| | | Other Govt. | 2,465 | 1,179 | 599 | 12 | ... | 1,222 | 2 | ... | ... | 5,479 | ... | ... | ... | ... | ... | 3,350 | 915 | 109 | ... | ... | ... | 4,374 | ... | 54,721 | 10 | 54,711 |
| | | Alienated | 1,384 | 1,160 | 164 | 2 | ... | 56 | 12 | ... | ... | 2,778 | 6 | ... | ... | ... | 6 | 25,801 | 161 | 169 | ... | ... | ... | 26,131 | ... | 73,290 | 308 | 72,982 |
| | | Total | 64,331 | 61,561 | 9,668 | 1,367 | ... | 7,370 | 4,696 | ... | ... | 148,993 | 835 | ... | 104 | ... | 939 | 1,074,824 | 3,086 | 7,969 | ... | ... | 1 | 1,085,880 | 51 | 3,080,328 | 28,030 | 3,052,298 |
| 7 | Násik | Rayatwári | 45,736 | 44,036 | 2,571 | 10,400 | ... | 106,028 | 14,389 | 1 | 35 | 223,196 | ... | ... | ... | ... | ... | 58,795 | 3,871 | 2,049 | ... | ... | ... | 64,715 | 93 | 1,969,755 | 49,124 | 1,920,631 |
| | | Other Govt | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 1,657 | 2,406 | 28 | 1,006 | 18 | 5,978 | 1,123 | ... | ... | 12,216 | ... | ... | ... | ... | ... | 1,345 | 313 | 66 | ... | ... | ... | 1,724 | 5 | 114,102 | 2,852 | 111,250 |
| | | Total | 47,393 | 46,442 | 2,599 | 11,406 | 18 | 112,006 | 15,512 | 1 | 35 | 235,412 | ... | ... | ... | ... | ... | 60,140 | 4,184 | 2,115 | ... | ... | ... | 66,439 | 98 | 2,083,857 | 51,976 | 2,031,881 |
| 8 | Ahmadnagar. | Rayatwári | 20,676 | 13,558 | 287 | 97,270 | ... | 24,840 | 3,640 | ... | ... | 160,271 | 154 | ... | ... | ... | 154 | 74,213 | 711 | 16,658 | ... | ... | 32 | 91,614 | 40 | 2,490,523 | 68,930 | 2,421,593 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 3,746 | 2,290 | 12 | 14,258 | ... | 736 | 351 | ... | ... | 21,393 | ... | ... | ... | ... | ... | 18,974 | 50 | 2,196 | ... | ... | 2 | 21,222 | 8 | 320,789 | 4,450 | 316,339 |
| | | Total | 24,422 | 15,848 | 299 | 111,528 | ... | 25,576 | 3,991 | ... | ... | 181,664 | 154 | ... | ... | ... | 154 | 93,187 | 761 | 18,854 | ... | ... | 34 | 112,836 | 48 | 2,811,312 | 73,380 | 2,737,932 |
| 9 | Poona | Rayatwári | 4,092 | 1,543 | 181 | 71,634 | ... | 40,575 | 13,768 | ... | 29 | 131,822 | ... | ... | ... | ... | ... | 7,014 | 197 | 6,555 | ... | ... | 3 | 13,769 | 450 | 1,863,446 | 84,947 | 1,778,499 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ... | ... | ... | ... | ..... | ... | ..... | ... | ..... |
| | | Alienated | 392 | 82 | 42 | 10,388 | ... | 4,857 | 2,480 | ... | ... | 18,241 | ... | ... | ... | ... | ... | 35 | 49 | 629 | ... | ... | ... | 713 | 35 | 328,744 | 17,766 | 310,978 |
| | | Total | 4,484 | 1,625 | 223 | 82,022 | ... | 45,432 | 16,248 | ... | 29 | 150,063 | ... | ... | ... | ... | ... | 7,049 | 246 | 7,184 | .. | ... | 3 | 14,482 | 485 | 2,192,190 | 102,713 | 2,089,477 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári... | 18,522 | 25,251 | 7,171 | 105,016 | ... | 12,644 | 33,833 | ... | ... | 202,437 | 1 | ... | 182 | ... | 183 | 13,759 | 154 | 35,817 | ... | ... | ... | 49,730 | 51 | 2,042,234 | 32,263 | 2,009,971 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 1,500 | 1,046 | 601 | 6,337 | ... | 1,400 | 2,955 | ... | ... | 13,839 | ... | ... | ... | ... | ... | 1,476 | 2 | 1,458 | ... | ... | ... | 2,986 | ... | 151,380 | 2,413 | 148,967 |
| | | Total ... | 20,022 | 26,297 | 7,772 | 111,353 | ... | 14,044 | 36,788 | ... | ... | 216,276 | 1 | ... | 182 | ... | 183 | 15,235 | 156 | 37,275 | ... | ... | ... | 52,666 | 51 | 2,193,614 | 34,676 | 2,158,938 |
| 11 | Sátára ... | Rayatwári... | 190 | 1,716 | 386 | 17,061 | ... | 13,564 | 41,293 | ... | 34 | 74,244 | ... | ... | ... | ... | ... | 4,433 | 2,647 | 8,209 | ... | ... | ... | 15,289 | 88 | 1,562,448 | 107,586 | 1,454,862 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 3 | 359 | 16 | 2,131 | ... | 2,328 | 11,140 | ... | ... | 15,977 | ... | ... | ... | ... | ... | 117 | 298 | 1,544 | ... | ... | ... | 1,959 | 1 | 258,037 | 23,147 | 234,890 |
| | | Total ... | 193 | 2,075 | 402 | 19,192 | ... | 15,892 | 52,433 | ... | 34 | 90,221 | ... | ... | .. | ... | ... | 4,550 | 2,945 | 9,753 | ... | ... | ... | 17,248 | 89 | 1,820,485 | 130,733 | 1,689,752 |
| | *III.—Karnâtak.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári... | 3,846 | 947 | 8,062 | 23,317 | ... | 8,452 | 10,017 | ... | ... | 54,641 | ... | ... | ... | ... | ... | 123,377 | 1,662 | 4,518 | ... | ... | ... | 129,557 | 12 | 1,468,920 | 31,554 | 1,437,366 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 932 | 120 | 2,090 | 5,955 | ... | 972 | 2,400 | ... | ... | 12,469 | ... | ... | ... | ... | ... | 21,465 | 584 | 1,085 | ... | ... | ... | 23,134 | 3 | 325,395 | 3,812 | 321,583 |
| | | Total ... | 4,778 | 1,067 | 10,152 | 29,272 | ... | 9,424 | 12,417 | ... | ... | 67,110 | ... | ... | ... | ... | ... | 144,842 | 2,246 | 5,603 | ... | ... | ... | 152,691 | 15 | 1,794,315 | 35,366 | 1,758,949 |
| 13 | Bijápur .. | Rayatwári... | 30,095 | 39,020 | 5,811 | 51,763 | ... | 14,655 | 61 | ... | ... | 141,405 | ... | ... | ... | ... | ... | 275,500 | 79 | 11,330 | ... | ... | ... | 286,909 | 17 | 2,544,473 | 12,608 | 2,531,865 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 2,255 | 3,101 | 879 | 4,970 | ... | 1,426 | 18 | ... | ... | 12,649 | ... | ... | ... | ... | ... | 37,788 | 15 | 1,240 | ... | ... | ... | 39,043 | ... | 298,259 | 673 | 297,586 |
| | | Total ... | 32,350 | 42,121 | 6,690 | 56,733 | ... | 16,081 | 79 | ... | ... | 154,054 | ... | ... | .. | ... | ... | 313,288 | 94 | 12,570 | ... | ... | ... | 325,952 | 17 | 2,842,732 | 13,281 | 2,829,451 |
| 14 | Dhárwár . | Rayatwári... | 21,174 | 14,203 | 12,780 | 29,893 | 4 | 3,639 | ... | ... | ... | 81,693 | ... | ... | ... | ... | ... | 429,002 | 241 | 5,880 | ... | ... | ... | 435,123 | 17 | 2,015,275 | 47,898 | 1,967,377 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | 589 | 661 | 591 | 1,029 | ... | 362 | ... | ... | ... | 3,232 | ... | ... | ... | ... | ... | 13,309 | 14 | 367 | ... | ... | ... | 13,690 | 2 | 111,101 | 1,889 | 109,212 |
| | | Total ... | 21,763 | 14,864 | 13,371 | 30,922 | 4 | 4,001 | ... | ... | ... | 84,925 | ... | ... | ... | ... | ... | 442,311 | 255 | 6,247 | ... | ... | ... | 448,813 | 19 | 2,126,376 | 49,787 | 2,076,589 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári... | 4,009 | ... | 2,456 | 5 | 14 | 10,663 | ... | ... | ... | 17,147 | ... | ... | ... | ... | ... | ... | 3,434 | 3,007 | ... | ... | ... | 6,441 | ... | 464,556 | 4,806 | 459,750 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,070 | 7 | 1,063 |
| | | Alienated ... | 2 | ... | ... | ... | ... | 75 | ... | ... | ... | 77 | ... | ... | ... | ... | ... | ... | ... | 5 | ... | ... | ... | 5 | ... | 7,593 | 50 | 7,543 |
| | | Total ... | 4,011 | ... | 2,456 | 5 | 14 | 10,738 | ... | ... | ... | 17,224 | ... | ... | ... | ... | ... | ... | 3,434 | 3,012 | ... | ... | ... | 6,446 | ... | 473,219 | 4,863 | 468,356 |
| 16 | Kolába ... | Rayatwári... | 1,755 | ... | 5 | ... | ... | 889 | ... | ... | 107 | 2,756 | ... | ... | ... | ... | ... | ... | 301 | 120 | ... | ... | ... | 421 | ... | 238,692 | 7,296 | 231,396 |
| | | Other Govt. | 3,997 | ... | 19 | ... | ... | 232 | ... | ... | ... | 4,248 | ... | ... | ... | ... | ... | ... | 339 | 13 | ... | ... | ... | 352 | ... | 160,351 | 4,209 | 156,142 |
| | | Alienated ... | 7 | ... | ... | ... | ... | 8 | ... | ... | ... | 15 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,972 | 32 | 1,940 |
| | | Total ... | 5,759 | ... | 24 | ... | ... | 1,129 | ... | ... | 107 | 7,019 | ... | ... | ... | ... | ... | ... | 640 | 133 | ... | ... | ... | 773 | ... | 401,015 | 11,537 | 389,478 |
| 17 | Ratnágiri... | Rayatwári... | 1,567 | ... | ... | ... | ... | 4,110 | ... | ... | 1 | 5,678 | ... | ... | ... | ... | ... | 1 | 921 | 1 | ... | ... | ... | 923 | 131 | 100,089 | 6,086 | 94,003 |
| | | Other Govt. | 1,045 | ... | ... | ... | ... | 308 | ... | ... | 1 | 1,354 | ... | ... | ... | ... | ... | ... | 206 | ... | ... | ... | ... | 206 | ... | 25,204 | 1,077 | 24,127 |
| | | Alienated ... | ... | ... | ... | ... | ... | 260 | ... | ... | ... | 260 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | 3,358 | 208 | 3,150 |
| | | Total ... | 2,612 | ... | ... | ... | ... | 4,678 | ... | ... | 2 | 7,292 | ... | ... | ... | ... | ... | 1 | 1,127 | 1 | ... | ... | ... | 1,129 | 131 | 128,651 | 7,371 | 121,280 |
| 18 | Kánara ... | Rayatwári .. | 165 | 7 | 248 | ... | ... | 231 | ... | ... | 310 | 961 | ... | ... | ... | ... | ... | ... | 82 | 128 | 1 | ... | ... | 211 | 38 | 251,257 | 13,635 | 237,622 |
| | | Other Govt. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Alienated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | | Total ... | 165 | 7 | 248 | ... | ... | 231 | ... | ... | 310 | 961 | ... | ... | ... | ... | ... | ... | 82 | 128 | 1 | ... | ... | 211 | 38 | 251,257 | 13,635 | 237,622 |
| | Total, A. | Rayatwári... | 263,641 | 203,108 | 96,686 | 408,643 | 3,920 | 247,075 | 121,960 | 3 | 9,206 | 1,354,245 | 2,204 | 831 | 286 | ... | 3,321 | 2,420,759 | 22,783 | 103,730 | 1 | ... | 36 | 2,547,309 | 1,891 | 22,723,679 | 691,402 | 22,032,277 |
| | | Other Govt. | 19,368 | 1,730 | 4,041 | 383 | 638 | 1,834 | 12 | ... | 2,387 | 30,383 | 183 | 180 | ... | ... | 363 | 140,368 | 3,512 | 1,187 | ... | ... | ... | 145,067 | 54 | 1,125,068 | 24,664 | 1,100,404 |
| | | Alienated ... | 13,917 | 11,238 | 5,083 | 46,077 | 110 | 18,592 | 20,487 | ... | 590 | 116,094 | 6 | ... | ... | ... | 6 | 141,171 | 1,858 | 8,815 | ... | ... | 2 | 151,846 | 54 | 2,094,727 | 64,764 | 2,029,963 |
| | | Total ... | 296,929 | 216,066 | 105,810 | 455,103 | 4,668 | 267,501 | 142,459 | 3 | 12,183 | 1,500,722 | 2,393 | 1,011 | 286 | ... | 3,690 | 2,702,298 | 28,153 | 113,732 | 1 | ... | 38 | 2,844,222 | 1,499 | 25,943,474 | 780,830 | 25,162,644 |
| | B.—Sind. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | 6,902 | ... | 29 | ... | 16,123 | ... | ... | ... | 61,970 | 85,024 | 3 | ... | ... | 1 | 4 | 315 | 57 | ... | ... | ... | ... | 372 | 2 | 515,876 | 37,351 | 478,525 |
| 20 | Hyderabad ... | | 42,793 | ... | ... | ... | 7,852 | ... | ... | ... | 64,818 | 115,463 | 4,787 | ... | ... | 9 | 4,796 | 45,445 | 306 | 2 | ... | ... | ... | 45,753 | 16 | 898,208 | 18,805 | 879,403 |
| 21 | Shikárpur ... | | 13,267 | 2 | ... | ... | 43,837 | 701 | ... | ... | 47,854 | 105,661 | 1,462 | ... | ... | 452 | 1,914 | 3,837 | 60 | ... | ... | ... | .. | 3,897 | 815 | 1,158,804 | 178,958 | 979,846 |
| 22 | Upper Sind Frontier | | 27,689 | ... | ... | ... | 19,503 | 16,367 | ... | ... | ... | 63,559 | 23 | ... | ... | ... | 23 | 626 | 19 | ... | ... | ... | ... | 645 | 113 | 212,759 | 12,928 | 199,831 |
| 23 | Thar and Párkar ... | | 5,025 | ... | ... | ... | 413 | ... | ... | ... | 14,451 | 19,889 | 171 | ... | ... | ... | 171 | 15,558 | 26 | 1 | ... | ... | ... | 15,585 | 122 | 615,033 | 7,962 | 607,071 |
| | Total, B. ... | | 95,676 | 2 | 29 | ... | 87,728 | 17,068 | ... | ... | 189,093 | 389,596 | 6,446 | ... | ... | 462 | 6,908 | 65,781 | 468 | 3 | ... | ... | ... | 66,252 | 1,068 | 3,400,680 | 256,004 | 3,144,676 |
| | Grand Total ... | | 392,605 | 216,068 | 105,839 | 455,103 | 92,396 | 284,569 | 142,459 | 3 | 201,276 | 1,890,318 | 8,839 | 1,011 | 286 | 462 | 10,598 | 2,768,079 | 28,621 | 113,735 | 1 | ... | 38 | 2,910,474 | 2,567 | 29,344,154 | 1,036,834 | 28,307,320 |

# IV.—Irrigation, 1892-93.

| No. | District. | | Net area cropped. | Area irrigated from Canals. | Area irrigated from other sources. | Total area irrigated. | Cropping of Irrigated Area. Wheat. | Rice. | Other Cereals and Pulses. | Sugarcane. | Other Food Crops. | Non-food Crops. | Fodder Crops. | Total. | Deduct area cropped with irrigation more than once. | Balance net irrigated Area. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | **A.—Bombay Presidency Proper.** | | Acres. | | | Acres. | | | | | | | | Acres. | Acres. | Acres. |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... ... ... | 705,862 | 3,470 | 43,718 | 47,188 | 10,564 | 16,223 | 16,048 | 2,112 | 3,241 | 2,781 | 449 | 51,418 | 4,230 | 47,188 |
| | | Other Government ... ... | 634,481 | 220 | 18,488 | 18,708 | 9,078 | 1,791 | 2,127 | 815 | 1,177 | 170 | 3,699 | 18,857 | 149 | 18,708 |
| | | Alienated ... ... ... | 54,128 | 330 | 2,525 | 2,855 | 1,426 | 582 | 564 | 28 | 64 | 30 | 211 | 2,905 | 50 | 2,855 |
| | | Total ... | 1,394,471 | 4,020 | 64,731 | 68,751 | 21,068 | 18,596 | 18,739 | 2,955 | 4,482 | 2,981 | 4,359 | 73,180 | 4,429 | 68,751 |
| 2 | Kaira... ... | Rayatwári ... ... ... | 552,064 | 2,098 | 19,335 | 21,433 | 4,795 | 2,571 | 5,132 | 525 | 2,455 | 6,162 | 1,558 | 23,198 | 1,765 | 21,433 |
| | | Other Government ... ... | 156,494 | ..... | 12,932 | 12,932 | 920 | 100 | 1,103 | 596 | 970 | 9,425 | 618 | 13,532 | 600 | 12,932 |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 708,558 | 2,098 | 32,267 | 34,365 | 5,715 | 2,671 | 6,235 | 921 | 3,425 | 15,587 | 2,176 | 36,730 | 2,365 | 34,365 |
| 3 | Panch Maháls . | Rayatwári ... ... ... | 245,011 | ..... | 1,244 | 1,244 | 465 | 129 | 18 | 217 | 271 | 144 | ..... | 1,244 | ..... | 1,244 |
| | | Other Government ... ... | 67,236 | ..... | 772 | 772 | 420 | ..... | ..... | 18 | 273 | 16 | 45 | 772 | ..... | 772 |
| | | Alienated ... ... ... | 35,605 | ..... | 407 | 407 | 313 | ..... | ..... | 16 | 78 | ..... | ..... | 407 | ..... | 407 |
| | | Total ... | 347,852 | ... | 2,423 | 2,423 | 1,198 | 129 | 18 | 251 | 622 | 160 | 45 | 2,423 | ... | 2,423 |
| 4 | Broach ... | Rayatwári ... ... ... | 575,536 | ..... | 746 | 746 | 2 | 10 | 10 | 82 | 516 | 136 | ..... | 756 | 10 | 746 |
| | | Other Government ... ... | 841 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 576,377 | ... | 746 | 746 | 2 | 10 | 10 | 82 | 516 | 136 | ... | 756 | 10 | 746 |
| 5 | Surat ... ... | Rayatwári ... ... ... | 484,264 | ..... | 10,857 | 10,857 | ..... | 3,097 | 17 | 5,447 | 1,258 | 1,125 | ..... | 10,944 | 87 | 10,857 |
| | | Other Government ... ... | 5,309 | ..... | 100 | 100 | ..... | ..... | ..... | 80 | 9 | 11 | ..... | 100 | ..... | 100 |
| | | Alienated ... ... ... | 3,810 | ..... | 22 | 22 | ..... | ..... | ..... | 9 | 2 | 11 | ..... | 22 | ..... | 22 |
| | | Total ... | 493,383 | ... | 10,979 | 10,979 | ... | 3,097 | 17 | 5,536 | 1,269 | 1,147 | ... | 11,066 | 87 | 10,979 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... ... ... | 2,924,605 | 12,588 | 26,520 | 39,108 | 13,360 | 1,843 | 3,585 | 2,361 | 7,818 | 12,319 | 44 | 41,330 | 2,222 | 39,108 |
| | | Other Government ... ... | 54,711 | 67 | 17 | 84 | 14 | ..... | 53 | 1 | 8 | 8 | ..... | 84 | ..... | 84 |
| | | Alienated ... ... ... | 72,982 | 232 | 724 | 956 | 181 | 3 | 41 | 54 | 490 | 188 | ..... | 957 | 1 | 956 |
| | | Total ... | 3,052,298 | 12,887 | 27,261 | 40,148 | 13,555 | 1,846 | 3,679 | 2,416 | 8,316 | 12,515 | 44 | 42,371 | 2,223 | 40,148 |
| 7 | Násik... ... | Rayatwári ... ... ... | 1,920,631 | 30,841 | 44,277 | 75,118 | 28,087 | 3,258 | 17,215 | 7,369 | 13,219 | 15,398 | 1,262 | 85,808 | 10,690 | 75,118 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 111,250 | 3,534 | 3,327 | 6,861 | 2,731 | 125 | 1,379 | 790 | 1,501 | 789 | 94 | 7,409 | 548 | 6,861 |
| | | Total ... | 2,031,881 | 34,375 | 47,604 | 81,979 | 30,818 | 3,383 | 18,594 | 8,159 | 14,720 | 16,187 | 1,356 | 93,217 | 11,238 | 81,979 |
| 8 | Ahmadnagar... | Rayatwári ... ... ... | 2,421,593 | 12,243 | 64,409 | 76,652 | 27,677 | 759 | 36,138 | 2,908 | 8,984 | 9,795 | 2,204 | 88,465 | 11,813 | 76,652 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 316,339 | 1,093 | 7,383 | 8,476 | 2,734 | 147 | 4,898 | 249 | 1,302 | 770 | 401 | 10,501 | 2,025 | 8,476 |
| | | Total ... | 2,737,932 | 13,336 | 71,792 | 85,128 | 30,411 | 906 | 41,036 | 3,157 | 10,286 | 10,565 | 2,605 | 98,966 | 13,838 | 85,128 |
| 9 | Poona... ... | Rayatwári ... ... ... | 1,778,499 | 26,567 | 62,608 | 89,175 | 24,119 | 1,174 | 44,656 | 7,176 | 23,111 | 6,005 | 2,753 | 108,994 | 19,819 | 89,175 |
| | | Other Government ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... ... ... | 310,978 | 2,919 | 10,436 | 13,355 | 3,893 | 77 | 4,885 | 1,171 | 4,564 | 949 | 154 | 15,693 | 2,338 | 13,355 |
| | | Total ... | 2,089,477 | 29,486 | 73,044 | 102,530 | 28,012 | 1,251 | 49,541 | 8,347 | 27,675 | 6,954 | 2,907 | 124,687 | 22,157 | 102,530 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur | Rayatwári | 2,009,971 | 8,043 | 72,824 | 80,867 | 29,872 | 3,611 | 38,831 | 3,776 | 9,467 | 19,167 | 1,254 | 105,978 | 25,111 | 80,867 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 148,967 | 291 | 5,657 | 5,948 | 2,351 | 174 | 3,860 | 210 | 351 | 920 | 107 | 7,973 | 2,025 | 5,948 |
| | | Total | 2,158,938 | 8,334 | 78,481 | 86,815 | 32,223 | 3,785 | 42,691 | 3,986 | 9,818 | 20,087 | 1,361 | 113,951 | 27,136 | 86,815 |
| 11 | Sátára | Rayatwári | 1,454,862 | 5,523 | 81,448 | 86,971 | 22,596 | 4,710 | 25,769 | 10,540 | 14,185 | 28,970 | 1,020 | 104,790 | 17,819 | 86,971 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 234,890 | 678 | 17,358 | 18,036 | 4,511 | 1,954 | 3,145 | 2,119 | 2,209 | 6,703 | 155 | 20,796 | 2,760 | 18,036 |
| | | Total | 1,689,752 | 6,201 | 98,806 | 105,007 | 27,107 | 6,664 | 28,914 | 12,659 | 13,394 | 35,673 | 1,175 | 125,586 | 20,579 | 105,007 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | |
| 12 | Belgaum | Rayatwári | 1,437,366 | 2,116 | 31,730 | 33,856 | 2,466 | 8,348 | 7,503 | 7,472 | 6,222 | 4,960 | 274 | 37,245 | 3,389 | 33,856 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 321,583 | 1,409 | 8,602 | 10,011 | 963 | 310 | 2,683 | 2,339 | 2,444 | 2,113 | 155 | 11,007 | 996 | 10,011 |
| | | Total | 1,758,949 | 3,525 | 40,342 | 43,867 | 3,429 | 8,658 | 10,186 | 9,811 | 8,666 | 7,073 | 429 | 48,252 | 4,385 | 43,867 |
| 13 | Bijápur | Rayatwári | 2,531,865 | 53 | 12,291 | 12,344 | 2,894 | 1,609 | 1,516 | 1,121 | 3,656 | 2,559 | 780 | 14,135 | 1,791 | 12,344 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 297,586 | 4 | 1,497 | 1,501 | 354 | 106 | 202 | 134 | 535 | 260 | 105 | 1,696 | 195 | 1,501 |
| | | Total | 2,829,451 | 57 | 13,788 | 13,845 | 3,248 | 1,715 | 1,718 | 1,255 | 4,191 | 2,819 | 885 | 15,831 | 1,986 | 13,845 |
| 14 | Dhárwár | Rayatwári | 1,967,377 | 7,822 | 71,393 | 79,215 | 39 | 70,935 | 609 | 2,415 | 3,718 | 2,310 | 41 | 80,067 | 852 | 79,215 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | 109,212 | 401 | 8,673 | 9,074 | ..... | 8,399 | 45 | 280 | 311 | 86 | 8 | 9,129 | 55 | 9,074 |
| | | Total | 2,076,589 | 8,223 | 80,066 | 88,289 | 39 | 79,334 | 654 | 2,695 | 4,029 | 2,396 | 49 | 89,196 | 907 | 88,289 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | |
| 15 | Thána | Rayatwári | 459,750 | ..... | 4,733 | 4,733 | ..... | ..... | ..... | 1,264 | 3,379 | 124 | 130 | 4,897 | 164 | 4,733 |
| | | Other Government | 1,063 | ..... | 7 | 7 | ..... | ..... | ..... | ..... | 7 | ..... | ..... | 7 | ..... | 7 |
| | | Alienated | 7,543 | ..... | 50 | 50 | ..... | ..... | ..... | ..... | 50 | ..... | ..... | 50 | ..... | 50 |
| | | Total | 468,356 | ..... | 4,790 | 4,790 | ..... | ..... | ..... | 1,264 | 3,436 | 124 | 130 | 4,954 | 164 | 4,790 |
| 16 | Kolába | Rayatwári | 231,396 | ..... | 2,471 | 2,471 | ..... | ..... | ..... | 30 | 1,811 | 630 | ..... | 2,471 | ..... | 2,471 |
| | | Other Government | 156,142 | ..... | 5 | 5 | ..... | ..... | ..... | ..... | 4 | 1 | ..... | 5 | ..... | 5 |
| | | Alienated | 1,940 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 389,478 | ..... | 2,476 | 2,476 | ..... | ..... | ..... | 30 | 1,815 | 631 | ... | 2,476 | ..... | 2,476 |
| 17 | Ratnâgiri | Rayatwári | 94,003 | ..... | 5,015 | 5,015 | ..... | 2,362 | 737 | 133 | 988 | 800 | ..... | 5,020 | 5 | 5,015 |
| | | Other Government | 24,127 | ..... | 665 | 665 | ..... | 274 | 41 | 7 | 319 | 26 | ..... | 667 | 2 | 665 |
| | | Alienated | 3,150 | ..... | 204 | 204 | ..... | 154 | 30 | 2 | 15 | 3 | ..... | 204 | ..... | 204 |
| | | Total | 121,280 | ..... | 5,884 | 5,884 | ..... | 2,790 | 808 | 142 | 1,322 | 829 | ... | 5,891 | 7 | 5,884 |
| 18 | Kánara | Rayatwári | 237,622 | 277 | 23,815 | 24,092 | ..... | 14,398 | 558 | 3,004 | 4,151 | 1,999 | 1 | 24,111 | 19 | 24,092 |
| | | Other Government | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total | 237,622 | 277 | 23,815 | 24,092 | ..... | 14,398 | 558 | 3,004 | 4,151 | 1,999 | 1 | 24,111 | 19 | 24,092 |
| | Total, A. | Rayatwári | 22,032,277 | 111,641 | 579,444 | 691,085 | 166,936 | 135,037 | 198,342 | 57,952 | 105,450 | 115,384 | 11,770 | 790,871 | 99,786 | 691,085 |
| | | Other Government | 1,100,404 | 287 | 32,986 | 33,273 | 10,432 | 2,165 | 3,324 | 1,317 | 2,767 | 9,657 | 4,362 | 34,024 | 751 | 33,273 |
| | | Alienated | 2,029,963 | 10,891 | 66,865 | 77,756 | 19,457 | 12,031 | 21,732 | 7,401 | 13,916 | 12,822 | 1,300 | 88,749 | 10,993 | 77,756 |
| | | Total | 25,162,644 | 122,819 | 679,295 | 802,114 | 196,825 | 149,233 | 223,398 | 66,670 | 122,133 | 137,863 | 17,522 | 913,644 | 111,530 | 802,114 |
| | B.—Sind. | | | | | | | | | | | | | | | |
| 19 | Karáchi | | 478,525 | 326,020 | 152,505 | 478,525 | 72,911 | 147,640 | 197,300 | 1,284 | 6,447 | 88,466 | 1,828 | 515,876 | 37,351 | 478,525 |
| 20 | Hyderabad | | 879,403 | 793,996 | 56,708 | 850,704 | 64,800 | 159,321 | 463,386 | 1,208 | 12,077 | 154,635 | 13,842 | 869,269 | 18,565 | 850,704 |
| 21 | Shikárpur | | 979,846 | 735,961 | 243,884 | 979,845 | 359,281 | 231,859 | 434,417 | 599 | 14,987 | 115,813 | 1,847 | 1,158,803 | 178,958 | 979,845 |
| 22 | Upper Sind Frontier | | 199,831 | 185,355 | 14,476 | 199,831 | 22,004 | 10,458 | 114,566 | 7 | 1,108 | 64,614 | 2 | 212,759 | 12,928 | 199,831 |
| 23 | Thar and Párkar | | 607,071 | 217,967 | 28 | 217,995 | 22,005 | 92,518 | 73,510 | 21 | 716 | 32,360 | 4,457 | 225,587 | 7,592 | 217,995 |
| | | Total, B. | 3,144,676 | 2,259,299 | 467,601 | 2,726,900 | 541,001 | 641,796 | 1,283,179 | 3,119 | 35,335 | 455,888 | 21,976 | 2,982,294 | 255,394 | 2,726,900 |
| | | Grand Total | 28,307,320 | 2,382,118 | 1,146,896 | 3,529,014 | 737,826 | 791,029 | 1,506,577 | 69,789 | 157,468 | 593,751 | 39,498 | 3,895,938 | 366,924 | 3,529,014 |

# V.—Agricultural Stock, 1892-93.

| No. | District. | | Cattle and other Quadrupeds. | | | | | | | | | | | | | | | | Ploughs. | | Carts. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Plough Cattle. | | Bulls for breeding purposes. | | Oxen and He-Buffaloes for other purposes. | | Milch Cattle. | | Young Stock. | | Total Cattle. | Horses and Ponies. | Sheep. | Goats. | Camels. | Mules and Donkeys. | Small. | Large, *i.e.*, over two Bullocks. | For riding. | For carrying loads. |
| | | | Oxen. | He-Buffaloes. | Bulls. | Bull Buffaloes. | Oxen. | He-Buffaloes. | Cows. | She-Buffaloes. | Calves. | Buffalo Calves. | | | | | | | | | | |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | **A.—Bombay Presidency Proper.** | | | | | | | | | | | | | | | | | | | | | |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | | | | | | |
| 1 | Ahmadábád ... | Rayatwári ... | 83,052 | 130 | 308 | 248 | 2,085 | 301 | 51,459 | 60,074 | 30,043 | 30,464 | 258,164 | 3,226 | 27,668 | 11,675 | 465 | 5,301 | 40,067 | 5 | 972 | 13,071 |
| | | Other Government | 57,055 | 20 | 260 | 173 | 439 | 64 | 41,606 | 28,395 | 18,076 | 12,163 | 158,341 | 2,627 | 23,791 | 22,915 | 230 | 2,367 | 25,917 | 15 | 245 | 7,736 |
| | | Alienated ... | 6,018 | 23 | 17 | 5 | 4 | 9 | 4,440 | 3,628 | 1,548 | 1,431 | 17,123 | 786 | 2,418 | 2,763 | 25 | 186 | 2,712 | 1 | 55 | 1,063 |
| | | Total ... | 146,125 | 173 | 585 | 426 | 2,528 | 374 | 97,595 | 92,097 | 49,667 | 44,058 | 433,628 | 6,639 | 53,877 | 37,353 | 720 | 7,854 | 68,696 | 21 | 1,272 | 21,870 |
| 2 | Kaira ... | Rayatwári ... | 90,606 | 53 | 136 | 291 | 512 | 83 | 39,549 | 75,524 | 36,657 | 56,722 | 300,133 | 1,865 | 27,300 | 4,081 | 107 | 3,707 | 48,652 | ..... | 1,055 | 18,933 |
| | | Other Government | 22,217 | 11 | 30 | 143 | 210 | 220 | 3,360 | 37,321 | 5,762 | 23,583 | 92,857 | 326 | 7,265 | 1,093 | 38 | 1,496 | 14,588 | 7 | 542 | 7,749 |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Total ... | 112,823 | 64 | 166 | 434 | 722 | 303 | 42,909 | 112,845 | 42,419 | 80,305 | 392,990 | 2,191 | 34,565 | 5,174 | 205 | 5,203 | 6,3240 | 7 | 1,597 | 26,682 |
| 3 | Panch Mahals ... | Rayatwári ... | 69,063 | 7 | 452 | 220 | 1,410 | 50 | 50,669 | 15,882 | 45,763 | 9,121 | 192,580 | 2,294 | 3,005 | 21,798 | 18 | 1,514 | 33,434 | ..... | 145 | 6,609 |
| | | Other Government | 20,837 | 2 | 155 | 43 | 351 | 13 | 16,061 | 4,662 | 12,783 | 2,279 | 57,186 | 624 | 3,392 | 6,724 | 6 | 406 | 9,605 | ..... | 62 | 2,150 |
| | | Alienated ... | 8,059 | ..... | 30 | 16 | 23 | 6 | 5,901 | 1,665 | 5,724 | 960 | 22,381 | 170 | 227 | 2,315 | 2 | 184 | 4,075 | ..... | 4 | 747 |
| | | Total ... | 97,959 | 9 | 637 | 279 | 1,784 | 69 | 72,571 | 22,209 | 64,270 | 12,360 | 272,147 | 3,088 | 6,624 | 30,837 | 26 | 2,104 | 47,114 | ..... | 211 | 9,506 |
| 4 | Broach ... | Rayatwári ... | 57,103 | 2 | 83 | 110 | 743 | 25 | 12,510 | 30,461 | 21,271 | 21,154 | 143,462 | 2,895 | 23,136 | 15,955 | 89 | 1,684 | 27,318 | ..... | 3,129 | 16,294 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Total ... | 57,103 | 2 | 83 | 110 | 743 | 25 | 12,510 | 30,461 | 21,271 | 21,154 | 143,462 | 2,895 | 23,136 | 15,955 | 89 | 1,684 | 27,318 | ..... | 3,129 | 16,294 |
| 5 | Surat ... | Rayatwári ... | 98,573 | 3,914 | 276 | 200 | 8,804 | 141 | 63,698 | 44,167 | 75,371 | 32,659 | 327,803 | 1,531 | 65,539 | 26,477 | 2 | 443 | 48,299 | 923 | 9,292 | 28,528 |
| | | Other Government | 739 | 45 | 2 | 2 | 52 | 4 | 657 | 313 | 849 | 255 | 2,918 | ..... | 359 | 95 | ... | ... | 383 | 8 | 52 | 224 |
| | | Alienated ... | 584 | 11 | 2 | 1 | 84 | 2 | 386 | 262 | 427 | 116 | 1,875 | 2 | 110 | 76 | ... | ... | 269 | 2 | 62 | 186 |
| | | Total ... | 99,896 | 3,970 | 280 | 203 | 8,940 | 147 | 61,741 | 44,742 | 76,647 | 33,030 | 332,596 | 1,533 | 66,008 | 26,648 | 2 | 443 | 48,951 | 933 | 9,406 | 28,938 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 332,915 | 1,544 | 3,448 | 779 | 19,860 | 2,569 | 178,337 | 107,221 | 138,569 | 72,354 | 856,595 | 23,724 | 37,221 | 177,838 | 7 | 7,949 | 97,615 | 18,324 | 37,052 | 65,941 |
| | | Other Government | 21,986 | 93 | 231 | 20 | 802 | 60 | 16,795 | 2,795 | 13,719 | 1,829 | 58,330 | 476 | 174 | 3,533 | ... | 70 | 10,703 | ..... | 386 | 2,853 |
| | | Alienated ... | 10,607 | 85 | 53 | 12 | 680 | 99 | 5,542 | 3,009 | 4,236 | 1,891 | 26,214 | 612 | 1,820 | 6,134 | ... | 280 | 2,327 | 1,045 | 871 | 1,603 |
| | | Total ... | 364,608 | 1,722 | 3,732 | 811 | 21,342 | 2,728 | 200,674 | 113,025 | 156,523 | 76,074 | 941,239 | 24,812 | 39,215 | 187,505 | 7 | 8,299 | 110,645 | 19,369 | 38,309 | 70,397 |
| 7 | Násik ... | Rayatwári ... | 209,558 | 23,063 | 3,937 | 300 | 12,660 | 520 | 158,865 | 29,354 | 97,562 | 16,122 | 551,941 | 14,162 | 111,075 | 146,935 | ... | 2,804 | 54,795 | 23,687 | 11,568 | 21,431 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 15,070 | 1,283 | 293 | 12 | 686 | 15 | 8,716 | 1,623 | 5,893 | 912 | 34,503 | 892 | 8,047 | 8,636 | ... | 170 | 3,155 | 2,137 | 833 | 1,708 |
| | | Total ... | 224,628 | 24,346 | 4,230 | 312 | 13,346 | 535 | 167,581 | 30,977 | 103,455 | 17,034 | 586,444 | 15,054 | 119,122 | 155,571 | ... | 2,974 | 57,950 | 25,824 | 12,401 | 23,139 |
| 8 | Ahmadnagar ... | Rayatwári ... | 263,462 | 5,119 | 1,036 | 157 | 8,500 | 1,116 | 184,585 | 29,928 | 130,141 | 14,425 | 638,469 | 21,069 | 285,876 | 228,662 | 6 | 7,102 | 19,265 | 40,430 | 11,647 | 16,996 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 32,386 | 80 | 61 | 12 | 1,167 | 163 | 19,673 | 2,871 | 14,523 | 1,449 | 72,385 | 2,578 | 34,425 | 24,132 | ... | 965 | 3,463 | 4,126 | 1,127 | 1,770 |
| | | Total ... | 295,848 | 5,199 | 1,097 | 169 | 9,667 | 1,279 | 204,258 | 32,799 | 144,664 | 15,874 | 710,854 | 23,647 | 320,301 | 247,794 | 6 | 8,067 | 22,698 | 44,856 | 12,774 | 18,766 |
| 9 | Poona ... | Rayatwári ... | 209,382 | 6,739 | 815 | 156 | 7,905 | 857 | 128,756 | 36,904 | 70,110 | 15,000 | 476,624 | 11,734 | 203,554 | 126,396 | 113 | 4,620 | 29,972 | 22,139 | 2,967 | 18,270 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 39,695 | 341 | 48 | 17 | 780 | 44 | 21,972 | 5,566 | 11,469 | 2,575 | 82,507 | 1,639 | 20,918 | 22,051 | ... | 628 | 3,110 | 4,800 | 462 | 4,134 |
| | | Total ... | 249,077 | 7,080 | 863 | 173 | 8,685 | 901 | 150,728 | 42,470 | 81,579 | 17,575 | 559,131 | 13,373 | 224,472 | 148,447 | 113 | 5,248 | 33,082 | 26,939 | 3,429 | 22,404 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Sholápur ... | Rayatwári ... | 194,410 | 671 | 1,063 | 319 | 8,089 | 2,499 | 124,860 | 35,910 | 97,057 | 21,008 | 490,364 | 12,130 | 227,045 | 123,630 | 44 | 3,749 | 3,568 | 16,930 | 833 | 13,505 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 13,708 | 586 | 90 | 7 | 300 | 158 | 9,216 | 1,988 | 7,103 | 1,315 | 34,471 | 767 | 21,784 | 10,580 | ... | 182 | 355 | 1,182 | 113 | 770 |
| | | Total ... | 208,118 | 7,705 | 1,153 | 326 | 8,389 | 2,657 | 134,076 | 35,928 | 104,160 | 22,323 | 524,835 | 12,897 | 248,829 | 134,210 | 44 | 3,931 | 3,923 | 18,112 | 946 | 14,275 |
| 11 | Sátára ... | Rayatwári ... | 188,980 | 11,799 | 583 | 130 | 5,381 | 823 | 117,206 | 61,852 | 76,208 | 36,233 | 499,195 | 12,261 | 290,233 | 87,611 | 3 | 2,264 | 20,082 | 19,010 | 1,410 | 18,984 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 34,221 | 2,610 | 81 | 31 | 570 | 79 | 20,696 | 12,515 | 15,940 | 7,943 | 94,686 | 1,751 | 32,386 | 15,481 | 1 | 158 | 5,458 | 3,489 | 137 | 3,563 |
| | | Total ... | 223,201 | 14,409 | 664 | 161 | 5,951 | 902 | 137,902 | 74,367 | 92,148 | 44,176 | 593,881 | 14,012 | 322,619 | 103,092 | 4 | 2,422 | 25,540 | 22,499 | 1,547 | 22,547 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 146,858 | 29,706 | 536 | 108 | 7,209 | 868 | 86,261 | 68,233 | 65,106 | 36,475 | 441,360 | 5,659 | 146,041 | 71,664 | 20 | 2,297 | 54,317 | 8,895 | 400 | 25,866 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 30,472 | 3,962 | 91 | 23 | 1,155 | 98 | 15,198 | 13,391 | 13,172 | 8,014 | 85,576 | 1,470 | 42,162 | 17,758 | 3 | 581 | 7,271 | 2,307 | 54 | 4,287 |
| | | Total ... | 177,330 | 33,668 | 627 | 131 | 8,364 | 966 | 101,459 | 81,624 | 78,278 | 44,489 | 526,936 | 7,129 | 188,203 | 89,422 | 23 | 2,878 | 61,588 | 11,202 | 454 | 30,153 |
| 13 | Bijápur ... | Rayatwári ... | 164,935 | 4,378 | 184 | 154 | 6,026 | 2,173 | 89,574 | 50,361 | 106,306 | 38,775 | 462,866 | 9,279 | 158,828 | 135,335 | 49 | 4,827 | 41,300 | 8,520 | 109 | 12,846 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 22,130 | 610 | 18 | 18 | 618 | 276 | 12,266 | 6,887 | 14,544 | 5,458 | 62,825 | 1,128 | 24,626 | 22,721 | 2 | 598 | 6,476 | 949 | 34 | 1,410 |
| | | Total ... | 187,065 | 4,988 | 202 | 172 | 6,644 | 2,449 | 101,840 | 57,248 | 120,850 | 44,233 | 525,691 | 10,407 | 183,454 | 158,056 | 51 | 5,425 | 47,776 | 9,469 | 143 | 14,056 |
| 14 | Dháwár ... | Rayatwári ... | 193,640 | 19,041 | 509 | 210 | 10,380 | 898 | 90,463 | 68,369 | 101,918 | 47,356 | 532,784 | 4,247 | 100,947 | 85,487 | 1 | 5,891 | 87,868 | 4,890 | 668 | 45,612 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | 14,634 | 2,623 | 16 | 12 | 653 | 77 | 8,073 | 5,082 | 9,407 | 3,667 | 44,244 | 335 | 3,500 | 5,932 | ... | 302 | 7,324 | 263 | 47 | 3,255 |
| | | Total ... | 208,274 | 21,664 | 525 | 222 | 11,033 | 975 | 98,536 | 73,451 | 111,325 | 51,023 | 577,028 | 4,582 | 104,447 | 91,419 | 1 | 6,193 | 95,192 | 5,153 | 715 | 48,867 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 124,876 | 35,758 | 771 | 89 | 4,220 | 267 | 100,127 | 20,957 | 90,684 | 16,186 | 393,435 | 1,329 | 3,433 | 40,688 | ... | 25 | 71,229 | ..... | 4,252 | 24,507 |
| | | Other Government | 1,155 | 538 | 5 | ... | 246 | 4 | 1,145 | 169 | 366 | 105 | 3,733 | 13 | 210 | 1,319 | ... | ... | 720 | ..... | 42 | 306 |
| | | Alienated ... | 3,225 | 436 | ... | ... | 107 | 7 | 1,078 | 215 | 804 | 134 | 6,006 | 10 | 2 | 331 | ... | ... | 1,597 | ..... | 88 | 802 |
| | | Total ... | 128,756 | 36,732 | 776 | 89 | 4,573 | 278 | 102,350 | 21,341 | 91,854 | 16,425 | 403,174 | 1,352 | 3,645 | 42,338 | ... | 25 | 73,546 | ... | 4,382 | 25,615 |
| 16 | Kolába ... | Rayatwári ... | 51,686 | 27,720 | 341 | 95 | 3,933 | 578 | 48,599 | 15,295 | 44,569 | 10,759 | 203,575 | 599 | 783 | 22,565 | ... | 21 | 36,857 | ..... | 1,424 | 6,345 |
| | | Other Government | 31,077 | 12,677 | 160 | 78 | 435 | 124 | 26,970 | 7,253 | 22,140 | 5,103 | 106,017 | 70 | 132 | 12,221 | ... | ... | 20,491 | ..... | 142 | 654 |
| | | Alienated ... | 764 | 391 | ... | ... | 39 | ... | 598 | 160 | 593 | 113 | 2,658 | 6 | ..... | 155 | ... | ... | 498 | ..... | 34 | 84 |
| | | Total ... | 83,527 | 40,788 | 501 | 173 | 4,407 | 702 | 76,167 | 22,708 | 67,302 | 15,975 | 312,250 | 675 | 915 | 34,941 | ... | 21 | 57,846 | ... | 1,600 | 7,083 |
| 17 | Ratnágiri ... | Rayatwári ... | 33,839 | 9,026 | 33 | 15 | 1,509 | 103 | 17,506 | 6,720 | 14,893 | 4,672 | 88,316 | 86 | 79 | 6,185 | ... | ... | 21,898 | ..... | 75 | 805 |
| | | Other Government | 8,096 | 1,761 | 7 | 6 | 85 | 59 | 5,550 | 1,746 | 4,903 | 1,256 | 23,469 | 21 | 2 | 2,318 | ... | ... | 4,881 | ..... | 10 | 32 |
| | | Alienated ... | 1,927 | 518 | ... | ... | 22 | 7 | 639 | 242 | 506 | 142 | 4,003 | 2 | ..... | 191 | ... | ... | 1,187 | ..... | 1 | 34 |
| | | Total ... | 43,862 | 11,305 | 40 | 21 | 1,616 | 169 | 23,695 | 8,708 | 20,302 | 6,070 | 115,788 | 109 | 81 | 8,694 | ... | ... | 27,966 | ... | 86 | 871 |
| 18 | Kánara ... | Rayatwári ... | 82,276 | 27,425 | 387 | 73 | 6,386 | 1,278 | 81,301 | 27,808 | 64,670 | 12,720 | 304,324 | 307 | 1,462 | 4,137 | ... | 78 | 54,143 | 7 | 83 | 6,190 |
| | | Other Government | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Alienated ... | ..... | ..... | ... | ... | ..... | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ... | ... | ..... | ..... | ... | ... |
| | | Total ... | 82,276 | 27,425 | 387 | 73 | 6,386 | 1,278 | 81,301 | 27,808 | 64,670 | 12,720 | 304,324 | 307 | 1,462 | 4,137 | ... | 78 | 54,143 | 7 | 83 | 6,190 |
| | Total A. ... | Rayatwári ... | 2,593,817 | 212,543 | 14,898 | 3,654 | 115,612 | 15,149 | 1,624,265 | 783,050 | 1,306,897 | 492,205 | 7,162,000 | 128,397 | 1,713,225 | 1,332,119 | 984 | 54,276 | 790,649 | 163,760 | 87,081 | 360,533 |
| | | Other Government | 163,162 | 15,147 | 850 | 465 | 2,620 | 548 | 112,234 | 82,654 | 78,598 | 46,573 | 502,851 | 4,157 | 35,325 | 50,218 | 274 | 4,339 | 87,288 | 30 | 1,481 | 21,704 |
| | | Alienated ... | 233,497 | 13,559 | 800 | 166 | 6,888 | 1,040 | 134,394 | 59,104 | 105,889 | 36,120 | 591,457 | 12,148 | 192,425 | 139,256 | 33 | 4,234 | 49,277 | 20,601 | 3,922 | 25,416 |
| | Grand Total ... | | 2,990,476 | 241,249 | 16,548 | 4,285 | 125,120 | 16,737 | 1,870,893 | 924,808 | 1,491,384 | 574,898 | 8,256,398 | 144,702 | 1,940,975 | 1,521,593 | 1,291 | 62,849 | 927,214 | 184,391 | 92,484 | 407,653 |
| | *B.—Sind.* | | | | | | | | | | | | | | | | | | | | | |
| 19 | Karáchi ... | | | | | | | | | | | | | | | | | | | | | |
| 20 | Hyderabad ... | | | | | | | | | | | | | | | | | | | | | |
| 21 | Shikárpur ... | | | | Not available. | | | | | | | | | | | | | | | | | |
| 22 | Upper Sind Frontier | | | | | | | | | | | | | | | | | | | | | |
| 23 | Thar and Párkar ... | | | | | | | | | | | | | | | | | | | | | |

# Accompaniment A to Agricultural Return No. II.

*Details of "Current Fallow," 1892-93.*

| No. | District. | | True fallow, *i.e.*, customary fallow, in rotation. | Grass lands, *i.e.*, numbers or parts of numbers set apart for grass and never sown. | Grass bound or prickly-pear bound lands. | Shindá'd or ráb land. | Land unsown owing to unseasonable or deficient rainfall. | Land left unsown for miscellaneous reasons. | Total fallow (Column 6 of Agricultural Return No. II) |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | *I.—Gujarát.* | | | | | | | | |
| 1 | Ahmadabad ... | Rayatwári ... | 5,537 | 1,571 | ..... | ..... | 1,203 | 73,024 | 81,335 |
| | | Other Government ... | 46,484 | 45,490 | ..... | ..... | 16,327 | 247,067 | 355,368 |
| | | Alienated ... | 190 | 4,500 | ..... | ..... | ..... | 40,018 | 44,708 |
| | | Total ... | 52,211 | 51,561 | ... | ... | 17,530 | 360,109 | 481,411 |
| 2 | Kaira ... | Rayatwári ... | 450 | 4,428 | 19 | 21 | 194 | 34,011 | 39,123 |
| | | Other Government ... | 61 | 4,103 | 2 | ..... | 184 | 1,816 | 6,166 |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 511 | 8,531 | 21 | 21 | 378 | 35,827 | 45,289 |
| 3 | Panch Mahá'ls ... | Rayatwári ... | 551 | 50 | 1,079 | ..... | 4,584 | 22,617 | 28,881 |
| | | Other Government ... | ..... | 3,000 | 14,252 | ..... | 7,641 | 58,781 | 83,674 |
| | | Alienated ... | ..... | 1,300 | 2,166 | ..... | 1,117 | 24,103 | 28,686 |
| | | Total ... | 551 | 4,350 | 17,497 | ... | 13,342 | 105,501 | 141,241 |
| 4 | Broach ... | Rayatwári ... | 51,689 | 18,641 | 2,342 | ..... | 1,445 | 621 | 74,738 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 51,689 | 18,641 | 2,342 | ... | 1,445 | 621 | 74,738 |
| 5 | Surat ... | Rayatwári ... | 1,139 | 227,806 | 134 | ..... | 114 | 12,271 | 241,464 |
| | | Other Government ... | ..... | 4,343 | ..... | ..... | ..... | 31 | 4,374 |
| | | Alienated ... | ..... | 1,157 | ..... | ..... | ..... | 14 | 1,171 |
| | | Total ... | 1,139 | 233,306 | 134 | ... | 114 | 12,316 | 247,009 |
| | *II.—Deccan.* | | | | | | | | |
| 6 | Khándesh ... | Rayatwári ... | 1,432 | 5,481 | 410 | ..... | 31,788 | 93,507 | 132,618 |
| | | Other Government ... | ..... | ..... | ..... | ..... | 249 | 104 | 353 |
| | | Alienated ... | ..... | 6 | 1,121 | 84 | 1,837 | 6,037 | 9,085 |
| | | Total ... | 1,432 | 5,487 | 1,531 | 84 | 33,874 | 99,648 | 142,056 |
| 7 | Násik ... | Rayatwári ... | 111,061 | 40,065 | 4,248 | 6,596 | 36,956 | 79,150 | 278,076 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 7,135 | 1,985 | 589 | ..... | 2,881 | 5,905 | 18,395 |
| | | Total ... | 118,196 | 41,950 | 4,837 | 6,596 | 39,837 | 85,055 | 296,471 |
| 8 | Ahmadnagar ... | Rayatwári ... | 39,321 | 10,374 | 25,728 | 807 | 6,502 | 221,052 | 303,784 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 4,018 | 1,171 | 10,142 | ..... | 669 | 31,267 | 47,267 |
| | | Total ... | 43,339 | 11,545 | 35,870 | 807 | 7,171 | 252,319 | 351,051 |
| 9 | Poona ... | Rayatwári ... | 126,335 | 62,386 | 9,851 | 16,925 | 8,412 | 83,976 | 307,885 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 17,757 | 22,014 | 1,010 | 1,189 | 1,545 | 21,212 | 64,727 |
| | | Total ... | 144,092 | 84,400 | 10,861 | 18,114 | 9,957 | 105,188 | 372,612 |
| 10 | Sholápur ... | Rayatwári ... | ..... | 81,601 | 32,037 | ..... | 24,388 | 137,463 | 275,489 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | 3,701 | 1,152 | ..... | 3,640 | 17,581 | 26,074 |
| | | Total ... | ..... | 85,302 | 33,189 | ... | 28,028 | 155,044 | 301,563 |
| 11 | Sátára ... | Rayatwári ... | 173,570 | 102,323 | 2,017 | 1,430 | 5,171 | 41,267 | 325,778 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 57,042 | 37,461 | 193 | 49 | 1,779 | 4,601 | 101,125 |
| | | Total ... | 230,612 | 139,784 | 2,210 | 1,479 | 6,950 | 45,868 | 426,903 |
| | *III.—Karnátak.* | | | | | | | | |
| 12 | Belgaum ... | Rayatwári ... | 68,239 | 55,737 | 32,929 | 72 | 10,126 | 80,923 | 248,026 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 15,653 | 40,345 | 12,309 | ..... | 1,413 | 42,323 | 112,043 |
| | | Total ... | 83,892 | 96,082 | 45,238 | 72 | 11,539 | 123,246 | 360,069 |
| 13 | Bijápur ... | Rayatwári ... | 2,881 | 51,695 | 114,851 | ..... | 3,423 | 80,402 | 253,252 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | 3,024 | 17,529 | ..... | 369 | 15,376 | 36,298 |
| | | Total ... | 2,881 | 54,719 | 132,380 | ... | 3,792 | 95,778 | 289,550 |
| 14 | Dhárwár ... | Rayatwári ... | 34,266 | 59,722 | 10,547 | 54 | 6,696 | 96,401 | 207,686 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | 2,695 | 9,435 | 1,279 | ..... | 630 | 16,033 | 30,072 |
| | | Total ... | 36,961 | 69,157 | 11,826 | 54 | 7,326 | 112,434 | 237,758 |
| | *IV.—Konkan.* | | | | | | | | |
| 15 | Thána ... | Rayatwári ... | 95,755 | 92,521 | 29,963 | 182,867 | 5,704 | 25,206 | 432,016 |
| | | Other Government ... | ..... | 7,629 | ..... | ..... | ..... | ..... | 7,629 |
| | | Alienated ... | ..... | 8,278 | ..... | ..... | ..... | 12,264 | 20,542 |
| | | Total ... | 95,755 | 108,428 | 29,963 | 182,867 | 5,704 | 37,470 | 460,187 |
| 16 | Kolába ... | Rayatwári ... | 71,650 | 44,453 | 3,881 | 45,474 | 713 | 10,289 | 176,460 |
| | | Other Government ... | 104,610 | 9,920 | 1,500 | 18,247 | ..... | 1,651 | 135,928 |
| | | Alienated ... | 360 | 829 | ..... | 1,105 | ..... | 5 | 2,299 |
| | | Total ... | 176,620 | 55,202 | 5,381 | 64,826 | 713 | 11,945 | 314,687 |
| 17 | Ratnágiri ... | Rayatwári ... | 59,094 | 1,186 | 434 | 7,462 | 590 | 16,102 | 84,868 |
| | | Other Government ... | 28,916 | 2,025 | 199 | 6,228 | 400 | 214 | 37,982 |
| | | Alienated ... | 770 | ..... | ..... | ..... | ..... | 732 | 1,502 |
| | | Total ... | 88,780 | 3,211 | 633 | 13,690 | 990 | 17,048 | 124,352 |
| 18 | Kánara ... | Rayatwári ... | 8,778 | 29,263 | 7,184 | 171 | 2,298 | 41,209 | 88,903 |
| | | Other Government ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Alienated ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | 8,778 | 29,263 | 7,184 | 171 | 2,298 | 41,209 | 88,903 |
| | Total ... | Rayatwári ... | 851,748 | 889,303 | 277,654 | 261,879 | 150,307 | 1,149,491 | 3,580,382 |
| | | Other Government ... | 180,071 | 76,510 | 15,953 | 24,475 | 24,801 | 309,664 | 631,474 |
| | | Alienated ... | 105,620 | 135,106 | 47,490 | 2,427 | 15,880 | 237,471 | 543,994 |
| | | Grand Total ... | 1,137,439 | 11,00,919 | 341,097 | 288,781 | 190,988 | 1,696,626 | 4,755,850 |

*Note.*—Details for Sind are not available.

ACCOMPANIMENT A TO RETURN No. III.

## Accompaniment A to Return No. III.

*Details of Kharif and Rabi under Cereals and Pulses, 1892-93.*

| No. | District. | | I.—Cereals. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Jowári, Sorghum Vulgare. | Bájri, Pennisetum Typhoideum. | Rice. | Wheat. | Barley. | Maize. | Kodra, Paspalum Scrobiculatum. | Rági, Eleusine Coracana. | Rále, Panicum Italicum. | Vari, P. Miliare. | Banti, P. flavidum. | Bhádli, P. pilosum. | Rájgira, Amaranth. | Others. | Total Cereals. |
| | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... | Kharif .. | 364,133 | 243,292 | 88,203 | ..... | ..... | 4,067 | 16,798 | 2,509 | ..... | 13,613 | 27,181 | ..... | 42 | 49 | 759,887 |
| | | Rabi .. | .... | .... | ..... | 238,129 | 21,579 | ..... | ..... | ..... | 132 | ..... | ..... | ..... | ..... | ..... | 259,840 |
| | | Total ... | 364,133 | 243,292 | 88,203 | 238,129 | 21,579 | 4,067 | 16,798 | 2,509 | 132 | 13,613 | 27,181 | ... | 42 | 49 | 1,019,727 |
| 2 | Kaira ... | Kharif .. | 51,514 | 232,768 | 112,226 | ..... | ..... | 403 | 101,028 | 58,420 | ..... | ..... | 1,779 | ..... | ..... | 5 | 558,143 |
| | | Rabi .. | 15,942 | ..... | 1 | 17,683 | 6,407 | ..... | ..... | ..... | 249 | 853 | ..... | ..... | 223 | ..... | 41,358 |
| | | Total ... | 67,456 | 232,768 | 112,227 | 17,683 | 6,407 | 403 | 101,028 | 58,420 | 249 | 853 | 1,779 | ... | 223 | 5 | 599,501 |
| 3 | Panch Maháls ... | Kharif .. | 5,292 | 46,967 | 58,964 | ..... | ..... | 102,238 | 21,907 | 15,828 | 249 | 3,597 | 15,741 | 353 | 1 | 1,107 | 272,244 |
| | | Rabi .. | 2,208 | ..... | ..... | 22,264 | 1,811 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 26,283 |
| | | Total ... | 7,500 | 46,967 | 58,964 | 22,264 | 1,811 | 102,238 | 21,907 | 15,828 | 249 | 3,597 | 15,741 | 353 | 1 | 1,107 | 298,527 |
| 4 | Broach ... | Kharif ... | 22,598 | 21,286 | 20,437 | ..... | ..... | 14 | 8,760 | 148 | 6 | 79 | 26 | ..... | 9 | ..... | 73,363 |
| | | Rabi .. | 73,254 | ..... | ..... | 101,381 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 174,635 |
| | | Total ... | 95,852 | 21,286 | 20,437 | 101,381 | ... | 14 | 8,760 | 148 | 6 | 79 | 26 | ... | 9 | ... | 247,998 |
| 5 | Surat ... | Kharif .. | 120,366 | 7,687 | 107,496 | ..... | ..... | 2 | 36,143 | 13,055 | 4 | 32 | 607 | 224 | 1 | 250 | 285,867 |
| | | Rabi .. | 1,000 | ..... | ..... | 46,886 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 47,886 |
| | | Total ... | 121,366 | 7,687 | 107,496 | 46,886 | ... | 2 | 36,143 | 13,055 | 4 | 32 | 607 | 224 | 1 | 250 | 333,753 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | | |
| 6 | Khándesh ... | Kharif .. | 535,802 | 671,995 | 29,140 | ..... | ..... | 2,774 | 4,001 | 9,515 | 367 | 5,716 | 3,830 | 2,023 | 218 | 95 | 1,265,47 |
| | | Rabi .. | .... | ..... | ..... | 262,704 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 262,70 |
| | | Total ... | 535,802 | 671,995 | 29,140 | 262,704 | 3 | 2,774 | 4,001 | 9,515 | 367 | 5,716 | 3,830 | 2,023 | 218 | 95 | 1,528,18 |
| 7 | Násik.. ... | Kharif .. | 39,329 | 794,308 | 53,102 | ..... | ..... | 1,849 | 1 | 148,236 | 571 | 47,324 | 98 | 3,203 | 188 | 1 | 1,088,21 |
| | | Rabi .. | 59,838 | ..... | ..... | 317,257 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 377,09 |
| | | Total ... | 99,167 | 794,308 | 53,102 | 317,257 | ... | 1,849 | 1 | 148,236 | 571 | 47,324 | 98 | 3,203 | 188 | 1 | 1,465,30 |
| 8 | Ahmadnagar ... | Kharif .. | 4,062 | 991,161 | 13,050 | ..... | 126 | 730 | 128 | 24,434 | 5,596 | 12,311 | 55 | 4,795 | 324 | 592 | 1,057,36 |
| | | Rabi .. | 799,415 | ..... | ..... | 235,716 | 114 | 7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,035,25 |
| | | Total ... | 803,477 | 991,161 | 13,050 | 235,716 | 240 | 737 | 128 | 24,434 | 5,596 | 12,311 | 55 | 4,795 | 324 | 592 | 2,092,616 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... | Kharif ... | 42,551 | 814,276 | 67,440 | ..... | 322 | 2,605 | 323 | 59,503 | 1,104 | 41,463 | 26 | 6,646 | 125 | 3,390 | 10,39,774 |
| | | Rabi ... ... | 581,749 | ..... | ..... | 115,731 | 982 | 83 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,897 | 700,424 |
| | | Total ... | 624,300 | 814,276 | 67,440 | 115,713 | 1,304 | 2,688 | 323 | 59,503 | 1,104 | 41,463 | 26 | 6,646 | 125 | 5,287 | 1,740,198 |
| 10 | Sholápur... ... | Kharif ... | 1,187 | 438,043 | 23,365 | ..... | ..... | 12,369 | 61 | 17 | 1,503 | 1,880 | ..... | 466 | 42 | 9,505 | 488,438 |
| | | Rabi ... ... | 1,049,316 | ..... | ..... | 57,438 | 1,996 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,108,750 |
| | | Total ... | 1,050,503 | 438,043 | 23,365 | 57,438 | 1,996 | 12,369 | 61 | 17 | 1,503 | 1,880 | ... | 466 | 42 | 9,505 | 1,597,188 |
| 11 | Sátára ... ... | Kharif ... | 330,053 | 547,986 | 37,692 | ..... | ..... | 9,034 | 17 | 59,763 | 28,615 | 51,793 | 9 | 13 | 818 | 6,033 | 1,071,826 |
| | | Rabi ... ... | 178,204 | ..... | ..... | 61,506 | 4,620 | 712 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 245,043 |
| | | Total ... | 508,257 | 547,986 | 37,692 | 61,506 | 4,620 | 9,746 | 17 | 59,763 | 28,615 | 51,793 | 9 | 13 | 818 | 6,034 | 1,316,869 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 12 | Belgaum... ... | Kharif ... | 617,775 | 205,550 | 113,423 | 1 | 15 | 5,760 | 59 | 48,856 | 70,814 | 31,516 | 71 | ..... | 47 | 216 | 1,094,103 |
| | | Rabi ... ... | 82,925 | 214 | ..... | 82,698 | 145 | 1,496 | ..... | 39 | 1,490 | 22 | ..... | ..... | ..... | ..... | 169,029 |
| | | Total ... | 700,700 | 205,764 | 113,423 | 82,699 | 160 | 7,256 | 59 | 48,895 | 72,304 | 31,538 | 71 | ... | 47 | 216 | 1,263,132 |
| 13 | Bijápur ... ... | Kharif ... | 703,653 | 429,097 | 12,368 | ..... | ..... | 800 | 35 | 180 | 37,256 | 9,319 | ..... | ..... | 1 | ..... | 1,192,709 |
| | | Rabi ... ... | 714,598 | ..... | ..... | 145,746 | 3 | 166 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8 | 860,521 |
| | | Total ... | 1,418,251 | 429,097 | 12,368 | 145,746 | 3 | 966 | 35 | 180 | 37,256 | 9,319 | ... | ... | 1 | 8 | 2,053,230 |
| 14 | Dhárwár... ... | Kharif ... | 609,527 | 5,946 | 154,292 | 256 | 17 | 38 | 64 | 45,267 | 89,348 | 37,599 | ..... | ..... | ..... | ..... | 942,354 |
| | | Rabi ... ... | 114,540 | ..... | ..... | 212,489 | ..... | 1 | ..... | ..... | 3,284 | 484 | ..... | ..... | ..... | ..... | 330,798 |
| | | Total ... | 724,067 | 5,946 | 154,292 | 212,745 | 17 | 39 | 64 | 45,267 | 92,632 | 38,083 | ... | ... | ... | ... | 1,273,152 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 15 | Thána ... ... | Kharif ... | 57 | ..... | 301,748 | 146 | ..... | 68 | 12,510 | 63,026 | ..... | 26,941 | ..... | ..... | ..... | ..... | 404,496 |
| | | Rabi ... ... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| | | Total ... | 57 | ... | 301,748 | 148 | ... | 68 | 12,510 | 63,026 | ... | 26,941 | ... | ... | ... | ... | 404,498 |
| 16 | Kolába ... ... | Kharif ... | ..... | ..... | 235,371 | ..... | ..... | ..... | 17,153 | 61,364 | 38 | 50,482 | ..... | ..... | ..... | ..... | 364,408 |
| | | Rabi ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Total ... | ... | ... | 235,371 | ... | ... | ... | 17,153 | 61,364 | 38 | 50,482 | ... | ... | ... | ... | 364,408 |
| 17 | Ratnágiri ... | Kharif ... | ..... | ..... | 43,023 | ..... | ..... | 1 | 19,129 | 23,143 | 20 | 12,248 | ..... | ..... | ..... | ..... | 97,564 |
| | | Rabi ... ... | ..... | ..... | 879 | ..... | ..... | ..... | ..... | 38 | ..... | ..... | ..... | ..... | ..... | ..... | 917 |
| | | Total ... | ... | ... | 43,902 | ... | ... | 1 | 19,129 | 23,181 | 20 | 12,248 | ... | ... | ... | ... | 98,481 |
| 18 | Kánara ... ... | Kharif ... | 1,636 | ..... | 180,596 | ..... | ..... | 18 | ..... | 6,715 | 107 | 350 | ..... | ..... | ..... | ..... | 189,422 |
| | | Rabi ... ... | ..... | ..... | 14,413 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 14,413 |
| | | Total ... | 1,636 | ... | 195,009 | ... | ... | 18 | ... | 6,715 | 107 | 350 | ... | ... | ... | ... | 203,835 |
| | Total ... | Kharif ... | 3,449,535 | 5,450,362 | 1,651,936 | 403 | 480 | 142,770 | 238,117 | 639,979 | 235,598 | 346,263 | 49,423 | 17,723 | 1,816 | 21,243 | 12,245,648 |
| | | Rabi ... ... | 3,672,989 | 214 | 15,293 | 1,917,612 | 37,660 | 2,465 | ..... | 77 | 5,155 | 1,359 | ..... | ..... | 223 | 1,906 | 5,654,953 |
| | Grand Total ... | | 7,122,524 | 5,450,576 | 1,667,229 | 1,918,015 | 38,140 | 145,235 | 238,117 | 640,056 | 240,753 | 347,622 | 49,423 | 17,723 | 2,039 | 23,149 | 17,900,601 |

ACCOMPANIMENT A TO RETURN No. III—*continued.*

*Details of Kharif and Rabi under Cereals and Pulses, 1892-93.*

| No. | District. | | II.—PULSES. | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Tur, Cajanus Indicus. | Gram, Cicer aretinum. | Mug, Phaseolus mungo. | Udid, P. radiatus. | Math, P. aconitifolius. | Vál, Dolichos lablab. | Chavli, D. catiang. | Kulith, D. uniflorus. | Vátáne, Pisum sativum. | Lentil (Masur). | Lákh (Láng) Chickling vetch. | Field Vetch (Guvár). | Others. | Total Pulses. |
| 1 | 2 | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | *I.—Gujarát.* | | | | | | | | | | | | | | | Acres. |
| 1 | Ahmadabad ... ... ... | Kharif ... | 2,419 | ..... | 12,912 | 7,240 | 45,393 | 91 | 819 | 8,834 | ..... | ..... | ..... | 7,007 | ..... | 84,715 |
| | | Rabi... ... | ..... | 29,253 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 29,253 |
| | | Total ... | 2,419 | 29,253 | 12,912 | 7,240 | 45,393 | 91 | 819 | 8,834 | ..... | ..... | ..... | 7,007 | ..... | 113,968 |
| 2 | Kaira ... ... ... ... | Kharif ... | 17,208 | ..... | 4,003 | 1,694 | 28,082 | 743 | 4,306 | ..... | ..... | ..... | 1 | 12,096 | ..... | 68,133 |
| | | Rabi... ... | 2,273 | 24,832 | ..... | ..... | ..... | 43 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 27,149 |
| | | Total ... | 19,481 | 24,832 | 4,003 | 1,694 | 28,082 | 786 | 4,306 | ..... | 1 | ..... | 1 | 12,096 | ..... | 95,282 |
| 3 | Panch Mahals ... ... | Kharif ... | 5,133 | ..... | 3,498 | 9,223 | 3,247 | 102 | 743 | 214 | ..... | ..... | ..... | 1,122 | ..... | 23,282 |
| | | Rabi... ... | ..... | 58,163 | ..... | ..... | ..... | ..... | ..... | ..... | 1,765 | ..... | ..... | ..... | ..... | 59,928 |
| | | Total ... | 5,133 | 58,163 | 3,498 | 9,223 | 3,247 | 102 | 743 | 214 | 1,765 | ..... | ..... | 1,122 | ..... | 83,210 |
| 4 | Broach ... ... ... | Kharif ... | 2,945 | ..... | 318 | 19 | 3,501 | 217 | 205 | ..... | 1 | ..... | ..... | 256 | ..... | 7,462 |
| | | Rabi... ... | 8,688 | 2,831 | 72 | ..... | 79 | 691 | 85 | ..... | 1,986 | ..... | 48,192 | 83 | 6 | 62,713 |
| | | Total ... | 11,633 | 2,831 | 390 | 19 | 3,580 | 908 | 290 | ..... | 1,987 | ..... | 48,192 | 339 | 6 | 70,175 |
| 5 | Surat ... ... ... ... | Kharif ... | 24,123 | ..... | 3,440 | 4,014 | 334 | 1,000 | 923 | ..... | ..... | ..... | ..... | 1,923 | ..... | 35,757 |
| | | Rabi... ... | 717 | 2,285 | 144 | ..... | ..... | 52,724 | ..... | ..... | 4,481 | 2 | 4,689 | 2 | ..... | 65,044 |
| | | Total ... | 24,840 | 2,285 | 3,584 | 4,014 | 334 | 53,724 | 923 | ..... | 4,481 | 2 | 4,689 | 1,925 | ..... | 100,801 |
| | *II.—Deccan.* | | | | | | | | | | | | | | | |
| 6 | Khándesh ... ... ... | Kharif ... | 74,619 | ..... | 10,753 | 33,454 | 16,224 | 274 | 1,493 | 83,692 | ..... | 662 | 164 | ..... | ..... | 221,335 |
| | | Rabi... ... | ..... | 56,126 | ..... | ..... | ..... | ..... | ..... | ..... | 2,828 | ..... | ..... | ..... | ..... | 58,954 |
| | | Total ... | 74,619 | 56,126 | 10,753 | 33,454 | 16,224 | 274 | 1,493 | 83,692 | 2,828 | 662 | 164 | ..... | ..... | 280,289 |
| 7 | Násik ... ... ... | Kharif ... | 32,805 | ..... | 11,481 | 32,779 | 13,415 | 20 | 148 | 87,356 | ..... | ..... | ..... | ..... | ..... | 178,004 |
| | | Rabi... ... | ..... | 93,947 | ..... | ..... | ..... | ..... | ..... | ..... | 3,098 | 9,281 | 4,674 | ..... | ..... | 111,000 |
| | | Total ... | 32,805 | 93,947 | 11,481 | 32,779 | 13,415 | 20 | 148 | 87,356 | 3,098 | 9,281 | 4,674 | ..... | ..... | 289,004 |
| 8 | Ahmadnagar ... ... ... | Kharif ... | 89,722 | ..... | 34,698 | 8,854 | 58,727 | 677 | 450 | 81,180 | ..... | ..... | ..... | ..... | 136 | 274,444 |
| | | Rabi ... | ..... | 127,506 | ..... | ..... | ..... | 22 | ..... | ..... | 1,484 | 547 | 139 | ..... | ..... | 129,698 |
| | | Total ... | 89,722 | 127,506 | 34,698 | 8,854 | 58,727 | 699 | 450 | 81,180 | 1,484 | 547 | 139 | ..... | 136 | 404,142 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Poona ... ... ... ... | Kharif ... | 48,672 | ..... | 8,540 | 7,015 | 48,945 | 1,223 | 201 | 49,121 | 9 | 9 | ..... | ..... | ..... | | 163,735 |
| | | Rabi ... | ..... | 78,204 | ..... | ..... | ..... | 2,835 | ..... | ..... | 2,241 | 1,722 | 2 | ..... | ..... | | 85,004 |
| | | Total ... | 48,672 | 78,204 | 8,540 | 7,015 | 48,945 | 4,058 | 201 | 49,121 | 2,250 | 1,731 | 2 | ... | ... | | 248,739 |
| 10 | Sholapur ... ... ... | Kharif ... | 112,337 | ..... | 12,912 | 1,107 | 76,270 | 48 | 28 | 29,226 | ..... | ..... | ..... | ..... | ..... | | 231,928 |
| | | Rabi ... | ..... | 71,379 | ..... | ..... | ..... | 58 | ..... | ..... | 52 | 89 | 417 | ..... | ..... | | 71,995 |
| | | Total ... | 112,337 | 71,379 | 12,912 | 1,107 | 76,270 | 106 | 28 | 29,226 | 52 | 89 | 417 | ... | ... | | 303,923 |
| 11 | Sátára... ... ... ... | Kharif ... | 74,165 | ..... | 17,184 | 41,252 | 82,049 | 4,267 | 361 | 51,381 | ..... | ..... | ..... | ..... | | 8 | 270,667 |
| | | Rabi ... | ..... | 75,157 | ..... | ..... | ..... | 103 | ..... | ..... | 1,613 | 727 | 18 | ..... | ..... | | 77,618 |
| | | Total ... | 74,165 | 75,157 | 17,184 | 41,252 | 82,049 | 4,370 | 361 | 51,381 | 1,613 | 727 | 18 | ... | | 8 | 348,285 |
| | *III.—Karnátak.* | | | | | | | | | | | | | | | | |
| 2 | Belgaum ... ... ... | Kharif ... | 88,095 | 4 | 16,326 | 6,729 | 9,650 | 1,684 | 1,240 | 62,498 | ..... | ..... | ..... | ..... | ..... | | 186,226 |
| | | Rabi ... | 63 | 44,226 | 110 | ..... | ..... | 6,432 | 22 | ..... | 6,199 | 5,851 | ..... | ..... | ..... | | 62,903 |
| | | Total ... | 88,158 | 44,230 | 16,436 | 6,729 | 9,650 | 8,116 | 1,262 | 62,498 | 6,199 | 5,851 | ... | ... | ... | | 249,129 |
| 3 | Bijápur ... ... ... | Kharif ... | 146,622 | ..... | 44,419 | 3 | 11,326 | 4,933 | 4,400 | 36,146 | ..... | ..... | ..... | ..... | ..... | | 247,849 |
| | | Rabi ... | ..... | 46,301 | ..... | 3 | ..... | 557 | ..... | ..... | 74 | ..... | ..... | ..... | ..... | | 46,935 |
| | | Total ... | 146,622 | 46,301 | 44,419 | 6 | 11,326 | 5,490 | 4,400 | 36,146 | 74 | ... | ... | ... | ... | | 294,784 |
| 4 | Dhárwár ... ... ... | Kharif ... | 68,960 | 96 | 48,968 | 6,072 | 14,258 | 3,546 | 827 | 46,822 | ..... | ..... | ..... | ..... | ..... | | 189,549 |
| | | Rabi ... | ..... | 46,415 | 4,417 | 1,065 | 1 | 3,356 | 46 | 4,799 | 486 | 47 | ..... | ..... | ..... | | 60,632 |
| | | Total ... | 68,960 | 46,511 | 53,385 | 7,137 | 14,259 | 6,902 | 873 | 51,621 | 486 | 47 | ... | ... | ... | | 250,181 |
| | *IV.—Konkan.* | | | | | | | | | | | | | | | | |
| 5 | Thána ... ... ... ... | Kharif ... | 6,204 | 971 | 351 | 18,792 | ..... | 2,344 | 4,098 | 1,098 | 247 | ..... | 225 | ..... | ..... | | 34,330 |
| | | Rabi ... | 84 | 1,458 | 34 | ..... | ..... | 614 | ..... | ..... | 9 | ..... | ..... | ..... | ..... | | 2,199 |
| | | Total ... | 6,288 | 2,429 | 385 | 18,792 | ... | 2,958 | 4,098 | 1,098 | 256 | ... | 225 | ... | ... | | 36,529 |
| 6 | Kolába... ... ... ... | Kharif ... | 421 | ..... | ..... | 3,358 | ..... | ..... | ..... | 44 | ..... | ..... | ..... | ..... | ..... | | 3,823 |
| | | Rabi ... | 1,891 | 2,802 | 2,534 | 5,521 | ..... | 8,574 | 62 | 54 | ..... | ..... | ..... | ..... | ..... | | 21,438 |
| | | Total ... | 2,312 | 2,802 | 2,534 | 8,879 | ... | 8,574 | 62 | 98 | ... | ... | ... | ... | ... | | 25,261 |
| 7 | Ratnágiri ... ... ... | Kharif ... | 313 | 2 | 253 | 2,161 | ..... | 600 | 51 | 8,326 | ..... | ..... | ..... | ..... | 168 | | 11,874 |
| | | Rabi ... | 104 | 45 | 82 | 215 | ..... | 755 | 50 | 746 | ..... | ..... | ..... | ..... | 233 | | 2,230 |
| | | Total ... | 417 | 47 | 335 | 2,376 | ... | 1,355 | 101 | 9,072 | ... | ... | ... | ... | 401 | | 14,104 |
| 8 | Kánara ... ... ... | Kharif ... | 209 | 21 | 45 | 236 | ..... | 21 | 8 | 1,642 | ..... | ..... | ..... | ..... | 3 | | 2,185 |
| | | Rabi ... | 2 | 330 | 1,339 | 1,593 | ..... | 77 | 1,128 | 332 | 316 | 1 | ..... | ..... | ..... | | 5,118 |
| | | Total ... | 211 | 351 | 1,384 | 1,829 | ... | 98 | 1,136 | 1,974 | 316 | 1 | ... | ... | 3 | | 7,303 |
| | Total ... | Kharif ... | 794,972 | 1,094 | 230,101 | 184,002 | 411,421 | 21,790 | 20,301 | 547,580 | 257 | 671 | 390 | 22,404 | 315 | | 2,235,298 |
| | | Rabi ... | 13,822 | 761,260 | 8,782 | 8,397 | 80 | 76,841 | 1,393 | 5,931 | 26,633 | 18,267 | 58,131 | 85 | 239 | | 979,811 |
| | Grand Total ... | | 808,794 | 762,354 | 238,833 | 192,399 | 411,501 | 98,631 | 21,694 | 553,511 | 26,890 | 18,938 | 58,521 | 22,489 | 554 | | 3,215,109 |

## Accompaniment B to Return No. III.

*Number of Principal Fruit-bearing Trees, 1892-93.*

| No. | District. | Mango. | Tamarind. | Jack. | Cocoanut. | Toddy-palm. | Date-palm. |
|---|---|---|---|---|---|---|---|
| | **A.—Presidency Proper.** | | | | | | |
| | *I.—Gujarát.* | | | | | | |
| 1 | Ahmadabad ... ... | 104,466 | 21,794 | ... | 74 | 177 | 610 |
| 2 | Kaira ... ... ... | 222,628 | 24,749 | ... | ..... | 15 | ... |
| 3 | Panch Maháls ... ... | 41,201 | 6,053 | ... | ..... | 129,062 | ... |
| 4 | Broach ... ... ... | 25,745 | 5,441 | 1 | 82 | 33,594 | 1,247 |
| 5 | Surat ... ... ... | 178,768 | 67,660 | 3,554 | 7,319 | 73,759 | 558,513 |
| | Total ... | 572,808 | 125,697 | 3,555 | 7,475 | 236,607 | 560,370 |
| | *II.—Deccan* | | | | | | |
| 6 | Khándesh ... ... | 222,086 | 14,638 | 19 | 130 | 258 | ... |
| 7 | Násik ... ... ... | 172,355 | 8,132 | 112 | 194 | 52 | ... |
| 8 | Ahmadnagar ... ... | 74,615 | 10,944 | 24 | 382 | ... | 4,436 |
| 9 | Poona ... ... ... | 113,682 | 8,171 | 824 | 1,308 | 18,499 | ... |
| 10 | Sholápur ... ... | 36,271 | 8,524 | 1 | 195 | 1 | 100,969 |
| 11 | Sátára ... ... ... | 167,637 | 11,372 | 9,020 | 6,079 | 265 | ... |
| | Total ... | 786,646 | 61,781 | 10,000 | 8,288 | 19,075 | 105,405 |
| | *III.—Karnátak.* | | | | | | |
| 12 | Belgaum ... ... | 115,653 | 23,296 | 10,844 | 2,334 | 38 | 83,308 |
| 13 | Bijápur ... ... ... | 72,880 | 24,399 | 50 | 2,505 | 107 | 420,000 |
| 14 | Dhárwár ... ... | 173,092 | 57,922 | 8,472 | 70,905 | 4 | 525,874 |
| | Total ... | 361,625 | 105,617 | 19,366 | 75,744 | 149 | 1,029,182 |
| | *IV.—Konkan.* | | | | | | |
| 15 | Thána ... ... ... | 186,384 | 13,502 | 2,952 | 87,629 | 71,562 | 12,532 |
| 16 | Kolába ... ... ... | 91,619 | 4,997 | 5,089 | 90,202 | 19,866 | 33 |
| 17 | Ratnágiri ... ... | 79,071 | 3,272 | 42,272 | 497,375 | ... | ... |
| 18 | Kánara ... ... ... | 141,688 | 12,785 | 101,204 | 985,012 | 6 | ... |
| | Total ... | 498,762 | 34,556 | 151,517 | 1,660,218 | 91,434 | 12,565 |
| | Total, A. ... | 2,219,841 | 327,651 | 184,438 | 1,751,725 | 347,265 | 1,707,522 |
| | **B.—Sind.** | | | | | | |
| 19 | Karáchi ... ... ... | 38,362 | 55 | ... | 980 | ... | 738 |
| 20 | Hyderabad ... ... | 90,636 | 24 | ... | ..... | ... | 2,062 |
| 21 | Shikárpur ... ... | 49,270 | ... | ... | ..... | ... | 149,902 |
| 22 | Upper Sind Frontier ... | 2,703 | 1 | ... | ..... | ... | 1,024 |
| 23 | Thar and Párkar ... | 4,320 | ... | ... | ..... | ... | 9 |
| | Total, B. ... | 185,291 | 80 | ... | 980 | ... | 153,735 |
| | Grand Total ... | 2,405,132 | 327,731 | 184,438 | 1,752,705 | 347,265 | 1,861,257 |

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